

PUBLIC MEETING AND WORKSHOP  
BEFORE THE  
CALIFORNIA ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

In the Matter of: )  
 )  
Bioenergy Action Plan Development ) Docket No:  
 ) 06-BAP-1  
 )

CALIFORNIA ENERGY COMMISSION  
1516 NINTH STREET  
HEARING ROOM A  
SACRAMENTO, CALIFORNIA

THURSDAY, MARCH 9, 2006

9:30 A.M.

Reported by:  
Christopher Loverro  
Contract No. 150-04-002

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMISSIONERS PRESENT

James D. Boyd, Presiding Member

Joseph Desmond, Chairman

John L. Geesman

Jackalyne Pfannenstiel

ADVISORS

Michael Smith, Advisor

STAFF PRESENT

Susan J. Brown, Senior Policy Analyst

ALSO PRESENT

A. J. Yates, Undersecretary

Food and Agriculture

Steve Larson, Public Utilities Commission

Bill Jones, Chairman  
Pacific Ethanol

Gregg Morris, Green Power Institute

John Menke, State Water Board

Dean Simeroth

Julie Malinowski-Ball  
California Biomass Energy Alliance

Tom Koehler  
Renewable Fuels Partnership

ALSO PRESENT

Scott Wetch  
California State Pipe Trade Council

John Boesel  
CalSTART

Loren Hov

Chris Trott, Director of Wood Fuel Purchasing  
Covanta Energy

Michael Theroux

Matt Peak  
CalSTEP

Todd Campbell  
Clean Energy

Doug Wickizer  
Department of Forestry

David Baskett  
American Ethanol

Tom Fulks  
Robert Bosch Corporation

Greg Shibley  
Waste To Energy

Cal Hodge

Paul Wuebben  
South Coast Air Quality Management District

Fernando Berton  
Waste Management

Steve Schaffer

Fred Maloney  
Daimler Chrysler

Alan DeSault

ALSO PRESENT

Joseph Blankenburg

Mike Carrington  
Carrington and Company

Luke Tonachel  
Natural Resource Defence Council

Mike Eaves  
Natural Gas Vehicle Coalition

Steve Kaffka  
University of California Davis

Matt Kramer

Eric Bowen  
Sigma Capital Group

Coby Skye  
Los Angeles County Department of Public Works

Jim Stewart  
Bioenergy Producers Association

Tom Sanford  
Energy Commissioner, City of Gridley

Louise Bedsworth  
Union of Concerned Scientists

Kevin McSpadden, Attorney  
Sylvan Power Company

Sandy Lawnsdale

Sean Edgar  
Clean Fleets Coalition

Gina Grey  
Western States Petroleum Association

Russell Teall  
Biodiesel Industries

ALSO PRESENT

Melissa Hunter  
Kings Conservation District

Brooke Coleman, Director  
National Renewable Energy Coalition

Ruth MacDougall  
SMUD

Monica Wilson  
Global Alliance for Incinerator Alternatives

Jon Van Bogart  
Clean Fuel USA

Lisa Morgenthaller-Jones  
Arare Ventures

Chris Donati  
Western Milling Incorporated

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1 P R O C E E D I N G S

2 9:30 a.m.

3 PRESIDING MEMBER BOYD: I want to  
4 welcome you all, and frankly I am impressed. I  
5 want to thank you all for coming here and joining  
6 us today. I'm Jim Boyd, Commissioner of the  
7 Energy Commission who also happens to Chair the  
8 Bioenergy Interagency Working Group at the present  
9 time.

10 I want to welcome the other members of  
11 the working group who are joining us here and  
12 hopefully we will have some others. I  
13 particularly want to welcome so many of my fellow  
14 commissioners who have shown interest in this  
15 subject and have chosen to join us.

16 This is a workshop, and I'd like to keep  
17 it an open dialogue workshop as best we can, keep  
18 it fairly informal as workshops should be, but  
19 this is a very rigidly and small structured room,  
20 so some of us are sitting up here at the dias, but  
21 I don't want this to be as much of a public  
22 hearing as a real exchange and interchange between  
23 folks. It is billed in the hearing notice as a  
24 workshop.

25 A few housekeeping chores. This is

1 being webcast, so anything that any of us say here  
2 is being broadcast to perhaps a fairly broad  
3 audience, and I want to say to that audience out  
4 there listening to this that you are live in this  
5 room. There is good acoustics and good speakers  
6 in here, and we hear everything you say or do in  
7 here, the rustling of papers, the comments to  
8 folks, the sipping of coffee, the turning of  
9 pages, etc. etc., so I just ask you to be  
10 conscious of that and recognize that the feedback  
11 we get in this room sometimes is mysterious if no  
12 slightly makes it difficult to hear some of the  
13 people speaking from the audience here.

14           We have a notice and agenda that  
15 hopefully most of you have. In order to  
16 accommodate those of you who want to speak, we are  
17 going through the process followed by the Energy  
18 Commission, the use of blue cards, but I notice  
19 already that you've discovered them because I have  
20 a fist full of them. Anybody who does want to  
21 testify later in the day during the public comment  
22 period, if you look to get one of these cards and  
23 fill it out and the Public Advisor Office  
24 representative standing in the back of the room,  
25 Nick Bartsch, whose hand is raised there, would



1 have these cards for anyone who wants them. We  
2 ask you to please use them because it gives us an  
3 opportunity to introduce you and see how many  
4 speakers we are going to have and what kind of  
5 time constraints we are going to have.

6 I am really pleased at the size of the  
7 turn out for this subject. This is a workshop  
8 being hosted by the Energy Commission, but it is a  
9 workshop of Interagency Working Group, a group  
10 that has been working this subject many of the  
11 members for quite a number of years and have been  
12 reincarnated multiple times to address this  
13 subject.

14 The genesis of the workshop and the  
15 project that we are address today is really the  
16 Governor's directions contained in his comments on  
17 the Energy Commission's 2003-2004 Integrated  
18 Energy Policy Reports, which comments he submitted  
19 and made available in August of last year.

20 Those of you who have read that document  
21 recognize I am sure the many many references in  
22 his letter to the Legislature and in his comments  
23 to this agency that was attached thereto, many  
24 many references to renewable energy, to biomass,  
25 to biofuels, and he pledged his support for this

1 subject, in particular for the Biomass  
2 Collaborative, which had been created by this  
3 agency a few years ago after earlier rounds of  
4 discussions in the subject of biomass and its  
5 potential.

6 He specifically reinvigorated the  
7 Interagency Working Group, which is hosting this  
8 workshop, and asked that the group develop an  
9 integrated and comprehensive state policy on  
10 biomass to include electricity and natural gas and  
11 petroleum substitution. On this last point, that  
12 is transportation fuels, he asked that this  
13 Commission in partnership with CAL EPA and all the  
14 other effected agencies that this group craft a  
15 long term plan by the 31st of this month that will  
16 result in a significant reduction of gasoline and  
17 diesel use and increase the use of alternative  
18 fuels.

19 The Bioenergy Working Group, which he  
20 had just reinvigorated, which is chaired by the  
21 CEC, fell err therefore to this charge and has  
22 been working to meet that charge since it was  
23 issued. We already had an infrastructure so to  
24 speak in place, and the group has been working  
25 towards that aim.

1           The Energy Commission on behalf of the  
2 group retained a consultant, an advocate  
3 consultant, to prepare a draft report, which they  
4 have done and which is the subject of our desire  
5 to receive input from all of you here today.

6           With that, I would like to first call  
7 upon my fellow commissioners, if they have any  
8 comments, and I will start with Chairman Desmond,  
9 and then I will be asking other representatives of  
10 the Interagency Working Group if they would like  
11 to make any comments before then turning the  
12 program over to Susan Brown, who is the Energy  
13 Commission's Project Manager for this effort.

14           Mr. Desmond.

15           CHAIRMAN DESMOND: Thank you,  
16 Commissioner Boyd. I'll keep my remarks very  
17 brief and simply echo what the Commissioner said  
18 that this is a project that in the past when we  
19 think of biomass has been described as a virtuous  
20 cycle and that it is a truly renewable resource  
21 that we can make best use of.

22           With that, we are very interested here  
23 today in listening to the thoughts, comments, and  
24 interactions on the draft document as we seek to  
25 improve it and forwarded it on to the Governor for

1 his further consideration. Likewise, I would like  
2 to thank all of the fellow members of both the  
3 Commission, the Interagency Working Group, and the  
4 Staff for the time that they put in as well as the  
5 consultant in taking the feedback and producing  
6 this document today. So, there was a lot of  
7 effort.

8           Lastly, Secretary Chrisman could not be  
9 here today, although he has written a letter and  
10 ask that I briefly address and communicate to this  
11 group what he has stated, so I will do that right  
12 now.

13           This is from Secretary Chrisman  
14 addressing both the Commissioners and members of  
15 the Interagency Bioenergy Working Group: "I  
16 appreciate the efforts of the Working Group  
17 members to address the key issues effecting the  
18 sustainable development of California's vast and  
19 only partially utilized biomass resources.

20           The draft plan reflects the views of the  
21 resources agency and its departments. The  
22 resources agency recognizes the multiple benefits  
23 of harnessing the energy of California's  
24 agricultural, forestry, and urban waste to achieve  
25 a suite of state policy objectives using biomass

1 resources to produce power, fuel, chemicals, and  
2 other valuable coal products can contribute to our  
3 state's fuel diversity, petroleum reduction,  
4 climate protection, and improved forest health.

5 Furthermore, biomass products provide a  
6 diverse set of business opportunities that will  
7 create well-paying technical job opportunities for  
8 Californians.

9 I thank you for your efforts to  
10 recommend an integrated and comprehensive action  
11 plan addressing California's needs. I hope that  
12 this report will provide the basis for a long  
13 range plan and the impetus for short term  
14 actions."

15 With that, I'll conclude my comments.

16 PRESIDING MEMBER BOYD: Thank you.

17 Commissioner Geesman, Commissioner Pfannenstiel,  
18 Undersecretary Yates, AJ Yates, the Undersecretary  
19 of Food and Agriculture, thank you for joining us.

20 UNDERSECRETARY YATES: First, thank you,  
21 Chairman Desmond and Commissioner Boyd for your  
22 commitment and leadership in bringing this process  
23 along in a timely and productive manner. Also I  
24 want to recognize the technical support provided  
25 by Professor Brian Jenkins and the Biomass

1 Collaborative at UC Davis.

2 Finally, I want to recognize the staff  
3 at Navigant Consultants for preparing the draft  
4 report under such a short time frame.

5 There is no question that bio-fuels are  
6 already an important part of our transportation  
7 fuel supplies. The polyfuel future is upon us.  
8 For example, agriculture derived ethanol makes up  
9 nearly six percent of our gasoline supply.

10 The role of agriculture in providing  
11 biofuels is growing almost expedientially, whether  
12 it is providing ethanol, bio-diesel, bio-methane,  
13 other liquids or gasses or electricity.

14 We must make sure this trend continues.  
15 To do so, we need to build a strategic alliance  
16 with the forestry and urban waste management  
17 sectors. There needs to be a comprehensive and  
18 consistent state policy to allow this industry to  
19 develop and compete in California.

20 That is why the Governor convened this  
21 work group. I believe a vibrant biofuels industry  
22 in California can provide multiple benefits to the  
23 California consumer, the California economy, and  
24 the California environment. I'm particularly  
25 interested in hearing how we can expand the

1 existing contributions to our fuel supply made by  
2 ethanol and bio-diesel and other bio-fuels by  
3 expanding the production and use of these fuels in  
4 California while protecting and improving the  
5 environment.

6           What can or must state governments do to  
7 achieve this goal? My staff and I are looking  
8 forward to hearing the public comments on the  
9 Navigant Draft Report and working with our sister  
10 agencies on the work group to provide  
11 recommendations to the Governor by the end of this  
12 month.

13           Thank you.

14           PRESIDING MEMBER BOYD: Thank you,  
15 Undersecretary Yates. Mr. Larson, who holds an  
16 honorary pass into this building anytime he wants  
17 to exercise it, but now he is here representing  
18 the Public Utilities Commission.

19           MR. LARSON: You wouldn't know, the  
20 security I had to go through and sign my life away  
21 this morning. They forget so fast.

22           PRESIDING MEMBER BOYD: I only said that  
23 for the public really.

24           MR. LARSON: Thank you very much,  
25 Commissioner Boyd, Commissioners, Mr.

1 Undersecretary. In terms of the PUC, thank you  
2 for inviting us here today in particular. I  
3 really wanted to be here so that I could reiterate  
4 the support that the Commission has for this  
5 approach, and we really are looking forward to the  
6 report and looking forward to making this a very  
7 viable industry if we can. We will do our part.

8 PRESIDING MEMBER BOYD: Thank you. I  
9 know Mr. Larson made an extra effort to get here  
10 today. He changed his calendar around to  
11 accommodate this hearing, and I appreciate that  
12 because the PUC, among the many state agencies,  
13 will play a very major role in helping us address  
14 this issue.

15 Now I'd like to just turn to any other  
16 of the folks who are representatives of the  
17 agencies and departments and what have you, wards  
18 and commissions, that are part of the Interagency  
19 Group if they would like to say anything, I'll  
20 turn to the ARB at my far left there just to Dean.  
21 You and Bob have any comments?

22 MR. FLETCHER: Just a brief comment. We  
23 are certainly supportive of the effort. We like  
24 the recommendation in there that talks about  
25 meeting the statewide goals and setting the



1 requirements. Our mantra, of course, is  
2 preserving the environmental benefits. That is  
3 our charge under the statute, that is what we are  
4 looking at doing, and we are posed to do that, so  
5 we look forward to working with the Committee and  
6 others through not only our rule making, but the  
7 development of this report.

8 PRESIDING MEMBER BOYD: Other members of  
9 our group in any particular order, have anything  
10 you would like to say? Fernando?

11 (No response.)

12 PRESIDING MEMBER BOYD: Thank you. Just  
13 before I turn this over to Susan to carry on, I  
14 want to make a couple more points. Just this  
15 morning I sat down and wrote down the titles of a  
16 few of those reports and white papers that are  
17 just sitting on my desk at the moment on this  
18 subject. I covered three pages of note paper in  
19 just a few instances of all the products of  
20 various groups, everything from the International  
21 Energy Agency to the WGA to many state agencies,  
22 Biomass Collaborative and what have you, which  
23 just signaled to me, again, how much traction this  
24 subject has finally gotten. I say that finally  
25 because some of us have been at this for more than

1 a decade.

2 Lastly, I am just going to read a  
3 headline that I pulled off a news service  
4 literally a few moments before I came down here,  
5 that I found to be interesting if not ironic. It  
6 says, "OPEC wants Bush to pay attention to failing  
7 oil infrastructure not bio-fuels."

8 I think we have their attention, folks.  
9 With that, I'd like to turn the program over to  
10 Susan Brown who I indicated is the Project Manager  
11 here for the Energy Commission and has been  
12 shepherding and stewarding the group here for  
13 quite some time. Susan.

14 MS. BROWN: Thank you, Commissioner  
15 Boyd, Mr. Chairman, members of the Commission, and  
16 members of the Working Group. I also want to  
17 extend my thanks to my colleagues in the other  
18 agencies who have been working very hard over the  
19 last several weeks to come to this point and to  
20 our consultants at Navigant, who I will be  
21 introducing shortly.

22 I'm going to make my remarks rather  
23 brief because I think our intent today is to  
24 actually compress the agenda to allow for maximum  
25 time for public comment. We adjusted the agenda

1 slightly from the one that we issued with the  
2 notice. I will be speaking first followed by  
3 Navigant, and then we will open the floor to  
4 public comments. I am hoping that all of you who  
5 wish to speak have already provided your blue card  
6 to Nick Bartsch from the Public Advisor's office  
7 so we can do this in an efficient manner.

8 I want to say a few words about our  
9 views, and now I am speaking on behalf on the  
10 Energy Commission staff. We view bioenergy as  
11 having a number of strategic benefits. It is a  
12 large and untapped resource, it is a renewable  
13 resource which can assist us in meeting the  
14 Accelerated State Renewable Portfolio Standard,  
15 and it has a multitude of other benefits. For  
16 example, insuring adequate fuel supply, fuel  
17 diversity, petroleum reduction, energy security,  
18 and climate protection.

19 I also want to point out that we believe  
20 the removal of excess materials from our forests  
21 and our farms can reduce the frequency intensity  
22 of forest fires and provide value added products  
23 to stimulate the state's economy.

24 In our Integrated Energy Report, which  
25 the Commission adopted last November, we made a

1 number of recommendations, first with respect to  
2 biomass. The first was to develop a longer term  
3 road map to guide future management of our biomass  
4 resources and also to set out a path for further  
5 research and development. This has been largely  
6 being carried out by the California Biomass  
7 Collaborative, which the Energy Commission and  
8 others are supporting.

9 We also said that there is a need for  
10 consistent and clear policies for sustainable  
11 biomass management production and use. We've  
12 expressed our intent to collaborate together as  
13 state government to secure the maximum amount of  
14 federal funding for future biomass research  
15 development, pilot demonstration projects, and we  
16 recognize the need for a public outreach and an  
17 awareness campaign to really inform the public and  
18 policy makers of the multiple benefits of using  
19 bioenergy.

20 Lastly, we recommend that state  
21 government and local governments, who could follow  
22 the state's lead, would increase the use of  
23 biomass and biofuels for their procurement  
24 processes.

25 With respect to biofuels, we also made

1 four primary recommendations. The first was that  
2 the state should establish a non-petroleum diesel  
3 fuel standard so that all diesel sold in this  
4 state would contain a minimum of 5 percent non-  
5 petroleum fuel content.

6 The second is that we ask this group,  
7 the Bioenergy Working Group, to make  
8 recommendations for us for a longer range plan on  
9 alternative fuels that was required by AB107,  
10 which was authored by Assembly Woman Pavley and  
11 requires a plan from the Energy Commission in  
12 consult with the Air Resources Board by June 30,  
13 2007.

14 We also advocated the establishment of a  
15 renewable fuel standard for gasoline so that all  
16 gasoline sold in California contains on an average  
17 a minimum of 10 percent renewable fuel content.

18 Lastly, we asked the Working Group to  
19 submit recommendations for inclusion in this  
20 report required under AB 1007, an increase in the  
21 use of E-85 and other biofuels.

22 Commissioner Boyd referenced the  
23 Governor's direction to us in his response to the  
24 2003 and 2004 Energy Reports, and I just want to  
25 briefly comment on those directives. Again, he

1 underscored his support for the California Biomass  
2 Collaborative. He asked us to reinvigorate and  
3 accelerate the work of this group. He asked that  
4 we include in our State Energy Policy a provision  
5 for substitution of fuels and electricity, natural  
6 gas, and petroleum, and also that we reflect in  
7 any policy the substantial multiple benefits of  
8 using ag, forestry, and urban waste for energy  
9 production, for fuels, and for chemicals.

10 Hence the goals of the Bioenergy Working  
11 Group as Commissioner Boyd has allude to, to  
12 identify interagency opportunities to advance the  
13 use of biomass for energy production, to address  
14 barriers and proposed solutions, to achieve  
15 synergy through coordinated state level efforts.

16 To that end, our group has been meeting  
17 regularly since May of last year, and you will see  
18 the membership of the group is listed here, and we  
19 are at the point now where we have a draft of the  
20 Bioenergy Action Plan, which we hope to finalize  
21 following this workshop by the end of the month.

22 Another iteration of the objectives of  
23 our plan, again, to expand the use of biomass,  
24 biogas, biofuels, and other bio-based products by  
25 identifying near-term actions. That is what can

1 state government do this year to encourage the use  
2 of this vital resource, how can we work together  
3 to expand markets for these urban, ag, and  
4 forestry residues, and also build a market for  
5 dedicated energy crops, and to identify and remove  
6 unnecessary regulatory requirements, while  
7 insuring "no environmental backsliding."

8 The process is as follows. Again, as  
9 Commissioner Boyd mentioned, we have hired  
10 Navigant Consulting to assist us in assembling the  
11 Action Plan. The plan was released last week. We  
12 have had a number of individual stakeholder  
13 meetings largely facilitated by Brian Jenkins and  
14 his staff at the Biomass Collaborative.

15 We are asking today for your brief  
16 comments. Your input is very important to us, and  
17 we have also set a deadline for March 17 for  
18 written comments because of the accelerated nature  
19 of this project.

20 With that, I want to thank you all for  
21 coming and, again, express my gratitude to my  
22 colleagues on the Bioenergy Working Group.

23 I'd like at this time to introduce our  
24 consultants who will make their presentation.

25 PRESIDING MEMBER BOYD: While the

1 consultants are getting ready, let me mention that  
2 I believe you all have copies of the agenda that  
3 we have provided as an attachment to the hearing  
4 notice as well as in the back of the room.

5 It is my desire to compress it as much  
6 as possible and get the public testimony started  
7 before the lunch break, so I think we have already  
8 gained an hour of that time, so I anticipate  
9 starting public testimony before lunch even.

10 MR. GERMAIN: Good morning, thank you.  
11 My name is Rich Germain, I am with Navigant  
12 Consulting, and I am one of the co-authors of the  
13 Recommendations for the Bioenergy Action Plan. I  
14 want to thank the members of the Energy  
15 Commission, the members of the Bioenergy  
16 Interagency Working Group for the invitation to be  
17 here today to present to you our recommendations.

18 I particularly want to thank Susan  
19 Brown --

20 PRESIDING MEMBER BOYD: Excuse me, I  
21 need to interrupt. To somebody out there on the  
22 phone, particularly somebody who might have a  
23 small child in the room with them, we can hear  
24 what's going on, and we ask you to either mute  
25 your phone and listen in, or try to be as quiet as



1 possible because all telephone loud speakers are  
2 pumped through our PA system here and are heard  
3 very loudly in this hearing room. Thank you.

4 UNIDENTIFIED SPEAKER: Could the  
5 Navigant presenter also speak louder?

6 MR. GERMAIN: Sure.

7 PRESIDING MEMBER BOYD: Fair comment.  
8 Thank you.

9 MR. GERMAIN: I particularly want to  
10 thank Susan Brown from the Energy Commission. She  
11 has served as a very valuable liaison to the key  
12 stakeholders that we have spoken with and has  
13 provided us tremendous support in preparation of  
14 this plan.

15 As we will describe to you shortly, the  
16 draft document that was distributed that you all  
17 represents a collaboration of ideas and comments  
18 from certain key stakeholders as well as a fairly  
19 extensive review of a number of important  
20 documents that have already been prepared on the  
21 subject.

22 Having said that, although my colleagues  
23 and I are pleased with the product that we have  
24 delivered, I want to tell you that we take no  
25 particular pride of ownership of the actions that

1 we have presented. That is to say that we are  
2 very open to the dialogue and very interested in  
3 the dialogue that will take place today, and we  
4 expect that your comments will greatly improve the  
5 product.

6 We would like to take about 30 minutes  
7 of your time to discuss a few key aspects of the  
8 plan, specifically, my colleague and co-author  
9 Ryan Katofsky will talk about some of the  
10 project's overall scope and objective. He will  
11 talk about some of the activities that we engaged  
12 in in crafting the plan. He will briefly  
13 summarize the current status of bioenergy in  
14 California as well as what we see as the future  
15 potential.

16 With that, I'd like to turn it over to  
17 Ryan.

18 MR. KATOFSKY: Thanks, Rich. I think  
19 the fact that children are listening just tells  
20 you how important this topic is today.

21 (Laughter.)

22 MR. KATOFSKY: First I'd like to add my  
23 thanks to everyone who has contributed to this so  
24 far. It has been a very interesting project, and  
25 we are looking forward to reviewing and addressing

1 the comments that we received today. I will try  
2 to go fairly quickly to give Rich a bit more time  
3 to go through this specific what we call the Tier  
4 1 recommendations, the immediate actions. A lot  
5 of my comments you will see will even echo some of  
6 the comments that were made in some of the opening  
7 statements.

8 Very quickly, the context for developing  
9 this action plan is the various over-arching state  
10 policy objectives that already exist. There are  
11 state greenhouse gas reduction targets, there are  
12 petroleum displacement targets that are fairly  
13 aggressive, and there are renewable electricity  
14 targets that are fairly aggressive.

15 These then can be translated into a  
16 series of objectives for the action plan for  
17 bioenergy and then those in turn lead to specific  
18 supporting actions for administrative actions,  
19 legislative, and regulatory.

20 Some of the objectives that we've  
21 identified for the Bioenergy Action Plan, in  
22 particular, is to create a positive environment  
23 for bioenergy, and in part, to achieve that it is  
24 to establish specific targets for biopower and  
25 biofuels. Position California as the leader in

1 developing and deploying new and promising  
2 bioenergy conversion technologies.

3 I think one of the things that needs to  
4 happen to move bioenergy to that next level so to  
5 speak is to bring new technologies to market. The  
6 other thing that was mentioned earlier is removing  
7 regulatory and market barriers, recognizing the  
8 full value that bioenergy brings to the  
9 environment and other aspects of California, and  
10 then also to promote public awareness both in the  
11 general public and also within policy makers so  
12 that they can make informed decisions about  
13 bioenergy.

14 Our approach to this project, just very  
15 quickly as has been mentioned, it is in an  
16 integrated approach. We are looking at fuels  
17 combined cooling, heating, and power, biomass  
18 heating, bio products, and electricity generation.  
19 We are looking steps in the value chain, from the  
20 harvesting and collection of that resource all the  
21 way down to the end-use of that resource.

22 Our task was not to reinvent the wheel  
23 so to speak, it was to really build upon all the  
24 things that have been done to date, the 40 plus  
25 reports that we reviewed, all the work that has

1     gone on in the Energy Commission and the  
2     Collaborative and others. We are really  
3     assembling, organizing, prioritizing, and putting  
4     some structure around all that work that has been  
5     done already.

6             It is action oriented. We have specific  
7     recommendations for specific agencies and others  
8     throughout the plan. Again, the focus is on what  
9     can the State of California do in the near term to  
10    basically lay the ground work for long term  
11    increases in bioenergy production and use.

12            This is our work plan. I'll just go  
13    through it real quick. We start off by doing that  
14    literature review. We created something that we  
15    call the Bioenergy Value Network Framework, and  
16    this is just a framework that we use to parse and  
17    organize all of that information that we gathered  
18    around the resources, the technologies, the  
19    potential actions, and so on. I'll just show you  
20    a quick schematic in a minute.

21            I know this is really for our purposes  
22    to organize all that information that we are  
23    processing. We also created essentially a sorting  
24    matrix where we compiled and developed a fairly  
25    comprehensive list of potential actions, and then

1 we are able to prioritize them, sort them, rank  
2 them in a fairly structured way. That was an  
3 important, I think, part of the process that we  
4 went through.

5 We then prepared the Draft Action Plan  
6 that was posted last week to the web. Next we are  
7 having the public workshop, which is happening  
8 today, and then the last task which judging by how  
9 many people are in this room will probably take a  
10 fair bit of time is to compile all of the comments  
11 that we are going to receive and incorporate that  
12 into our final report due by the end of the month.

13 This very quickly is a schematic of the  
14 Value Networks. It basically depicts the sort of  
15 follow the biomass, starting with agriculture  
16 resources, forestry resources, and municipal  
17 biomass resources and follows it through  
18 collection and transportation, conversion and  
19 refining distribution, and then finally the end-  
20 use markets. Again, we use this as a structure  
21 for ourselves to help organize all of the  
22 information that we were collecting.

23 Just very quickly looking at the biomass  
24 resource potential. I think someone mentioned  
25 earlier that we only use a fraction of the biomass

1 available in California. The estimate is that in  
2 2005 about four million dry tons of biomass were  
3 used, split roughly evenly between forestry,  
4 agriculture, and municipal waste. That represents  
5 about 10 to 15 percent of the technically  
6 recoverable biomass.

7           These are estimates that have been put  
8 together through work supported by the CEC and,  
9 again, that resource is split amongst those three  
10 resources fairly evenly. Then the out years also  
11 assumes some development crops, but we are talking  
12 about roughly 40 million dry tons of technically  
13 recoverable biomass, which in and of itself is  
14 only a fraction of the gross potential that is out  
15 there, which I believe is roughly double if not a  
16 little bit more than double this number.

17           There is a lot of material out there  
18 that can potentially be used for energy. In  
19 addition to the solid biomass resources, there is  
20 an estimated 90 billion cubic feet per year of  
21 landfill gas and biogas. On an energy basis, that  
22 is another roughly three million dry tons of  
23 biomass.

24           If you take that material and say well,  
25 how much power can I produce, how much fuels can I

1 produce, there is roughly somewhere between about  
2 5,000 and 7,500 MW of biopower potential depending  
3 on the efficiency of conversion of that material.

4 I've compared that here to the  
5 quantities that would be required of biopower if  
6 you were to maintain the current 20 percent share  
7 of biomass power in the renewable energy mix in  
8 California. The bottom line shows you what you  
9 would have to do under the current RPS to maintain  
10 a 20 percent share, and the dotted line shows you  
11 under the accelerated RPS, and it ranges between  
12 about 1,700 to 1,800 MWs to about 2,400 MWs. You  
13 can see that relative to what is out there on a  
14 technically recoverable basis, there is more than  
15 enough biomass to maintain its current 20 percent  
16 share of the RPS.

17 Similarly, if you look at biofuels, and  
18 we have chosen a couple just to illustrate the  
19 potential. This is if you were to make biofuels  
20 from cellulosic biomass, using cellulosic ethanol  
21 technology or what is known as Fischer-Tropsch  
22 liquids, sometimes referred to as biomass to  
23 liquids. It is essentially a synthetic diesel  
24 product, a high quality diesel product.

25 There is somewhere between about 2 1/2



1 and 3 billion gallons of potential just using that  
2 resource that I showed you earlier two slides ago,  
3 the 40 million dry tons. We have compared that to  
4 where California is today in terms of its current  
5 consumption and production, but 900 million  
6 gallons currently consumed, primarily ethanol in  
7 the gasoline pool. The instate production  
8 capacity of ethanol and biodiesel is in the range  
9 of 50 million gallons today. So, you can see that  
10 from production standpoint on biofuels, there is a  
11 lot more room to grow.

12           There are also other biofuels that could  
13 be produced from waste oils, from oil seed crops,  
14 from sugar or starch crops that are currently not  
15 grown in large quantities in California, as well  
16 as biomethane from landfill gas and biogas. There  
17 is a lot of potential out there.

18           Very quickly looking at the benefits of  
19 bioenergy. Some of these have been mentioned  
20 already. I will just quickly go through them.  
21 Helping meet the RPS, contributing to resource  
22 adequacy, basically grid reserve margins and grid  
23 reliability, biomass power is firm, baseload  
24 capacity and can be counted on for that capacity,  
25 reducing petroleum dependence, this was mentioned

1 earlier greenhouse reduction, various air quality,  
2 and environmental benefits, such as wildfire  
3 prevention, forest integrity, economic development  
4 opportunities that are fairly unique relative to  
5 other energy technologies, helping increase  
6 landfill diversion, and also through being less  
7 toxic to the environment and also by preserving  
8 forest integrity, helping with water quality  
9 issues.

10           Despite all those benefits, there are a  
11 fair number of barriers, and I am sure many of you  
12 are aware of these. We divided them into three  
13 broad categories. There is a policy and  
14 regulatory barriers, market barriers, and then  
15 technical or technology barriers. There are some  
16 fairly fragmented state policies right now,  
17 policies as well, they don't fully recognize all  
18 the benefits that bioenergy brings to this state.

19           Financial incentives is another area  
20 that is not optimized. A good example is at the  
21 federal level is the production tax credit, which  
22 is an off again/on again kind of incentive which  
23 makes it hard to really build a business around  
24 and has been more favorable to other renewable  
25 technologies relative to biomass.

1           A complex in time consuming permitting  
2   is a barrier to development and concerns around  
3   environmental justice, specifically about where  
4   you might locate some of these facilities. That  
5   would need to be taken into account as well.

6           In terms of market barriers, the issue  
7   of harvesting and collecting the feed stock, just  
8   having that infrastructure to cost effectively  
9   deliver much larger quantities of biomass than has  
10  traditionally or historically been delivered in  
11  this state.

12          The capital market issues, the risk  
13   versus return, getting the private sector to  
14   invest significant dollars, and we are talking  
15   potentially billions of dollars of capital going  
16   into this industry.

17          In some cases, you need new distribution  
18   and end-use infrastructure. There are public  
19   perception issues. Something that I find is  
20   particularly unique to biomass, is this issue of  
21   cross industry collaboration between agriculture,  
22   energy, utilities, waste management, those are  
23   industries that don't have a history necessarily  
24   of collaborating on energy issues and you would  
25   need to do that to really make this a big

1 business.

2 On the technical side, there is the  
3 issue of cost competitiveness of current  
4 technologies. As I mentioned earlier, the need to  
5 commercialize some new technologies to move some  
6 of these biofuels and more biopower into the  
7 market.

8 The issue of feedstock quality, whether  
9 it is finding ways to make the feedstock quality  
10 more consistent or finding technologies that can  
11 handle a broad range of feedstock quality issues.

12 With that quick overview of the process  
13 and some background, I am going to turn it over to  
14 Rich where he can walk you through the specific  
15 actions that we have identified as Top Tier  
16 actions for the state.

17 Thank you.

18 MR. GERMAIN: As we have indicated, the  
19 goal here was to develop a plan that included a  
20 limited number of near term actions that were seen  
21 as likely to have the greatest impact on the  
22 development of a bioenergy industry in this state.

23 We purposely tried to avoid creating an  
24 exhaustive list of actions because then we felt  
25 the question would naturally become, well, where

1 do we start. So, this is really the answer to the  
2 question where do we start. It is designed to be  
3 the answer to the question "Where do we start?".

4 We did take a stab at identifying the  
5 sort of second priority if you will. We call them  
6 Second Tier actions. Those are listed in the  
7 document itself. I won't go over those right now,  
8 but you can see those in Chapter 6.

9 Finally, we believe that many of the  
10 recommendations that we have put forth can be  
11 created through the creation of an executive  
12 order.

13 The first set of recommendation actions  
14 have to do with the creation of targets for both  
15 biofuels and biopower. We think the targets  
16 address one of the most fundamental and overriding  
17 needs in the industry, and that is the creation of  
18 a long term market to stimulate investment.

19 Although the targets alone will  
20 probably not achieve significant investment in  
21 bioenergy, they represent a necessary component  
22 and do reflect the state's commitment to  
23 bioenergy.

24 The proposed targets, as you can see  
25 here, by 2020 the target of two billion gallons of

1 biofuels would be used in the state with a minimum  
2 of 40 percent produced in California. The  
3 biopower target would be the development of 1,500  
4 MWs of new biopower capacity by 2020 so that it  
5 can continue to provide 20 percent share of the  
6 state's accelerated renewable portfolio standard.

7           The targets are based on some  
8 assumptions and some logic, which I will review  
9 with you. First, we assume that the average  
10 annual biomass utilization would be increased by  
11 10 percent per year from now through 2020. The  
12 total use of biomass was expected to be about one  
13 half of the technically achievable recoverable  
14 biomass that Ryan pointed out before. So, about  
15 20 million tons of the 40 million that is  
16 technically recoverable. That is proposed to be  
17 split 50/50 between biopower and biofuels.

18           For power, that implies a doubling of  
19 the capacity that is now produced by biogas and  
20 landfill gas facilities to about 700 MWs, and it  
21 implies a tripling of solid biopower capacity to  
22 about 1,800 MWs.

23           We also assume that the average  
24 efficiency of plants using solid biomass would  
25 increase from now about the low 20's to about 30

1 percent. That is consistent with information that  
2 has been reported in several CEC reports.

3 For fuels, the 2 billion gallon  
4 consumption assumes a 5 percent annual growth from  
5 today through 2020. That would be a 5 percent  
6 annual growth. The 40 percent in-state  
7 production, which equates to about 800 million  
8 gallons, is what we believe would be achievable  
9 given the remaining the biomass, that which was  
10 not used for biopower, so about 10 million bone  
11 dry tons. It fulfills one half of the 2020  
12 petroleum reduction alternative targets that have  
13 been set by the state. It is generally consistent  
14 with the 2005 Integrated Energy Policy Report.

15 We are not suggesting that these targets  
16 be established through a mandate at the moment,  
17 but we do believe that targets alone would be a  
18 very good signal to the market that the state was  
19 serious about the bioenergy industry.

20 The next set of actions deal with the  
21 Bioenergy Interagency Working Group. This would  
22 seem to be the appropriate place for developing an  
23 integrated and coordinated plan that creates a  
24 favorable regulatory environment while also  
25 addressing some of the more resilient issues

1 related to bioenergy and still maintaining proper  
2 oversight for each of the agencies.

3           There are two broad areas that we would  
4 suggest the Interagency Working Group focus on in  
5 the near term. The first is the elimination of  
6 regulations that either unnecessarily or  
7 unintentionally prevent the development of new  
8 facilities.

9           One of the biggest areas of interest we  
10 believe is in the area of permitting and facility  
11 siting. We think that some streamlining can be  
12 done to that process that would encourage new  
13 investment.

14           The second area of focus has to do with  
15 the idea of net environmental benefits. It  
16 suggests that the Interagency Working Group look  
17 at all environmental components and environmental  
18 emission issues related to bioenergy, both the  
19 criteria pollutants that are well known, but also  
20 those pollutants that are not criteria pollutants  
21 such as greenhouse gas.

22           The goal of the exercise here would be  
23 to decide on a best course of action on how to  
24 deal with that netting effect and whether or not  
25 the state believes that there is a net benefit to



1 the use of bioenergy.

2 The next set of actions are addressed at  
3 the Public Utilities Commission and deal  
4 specifically with biopower. We think it is very  
5 important for the CPUC to work with the investor-  
6 owned utilities to try and preserve the operating  
7 status of the state's existing biopower capacity.

8 It appears that the industry could be  
9 looking at some further shrinkage once the fixed  
10 price mechanism terminates, which they have been  
11 operating under for several years, terminates in  
12 July.

13 Other than the effect to the RPS, we  
14 think that there are two important reasons why  
15 this is not a good thing. First, we think it  
16 would send a chilling effect to the market, both  
17 for the development of new facilities as well as  
18 the repowering and reenergizing of some existing  
19 facilities and those that have been shut down.

20 Although there are opportunities for  
21 facilities to participate in the RPS procurement  
22 solicitations by the utilities, there is still  
23 perhaps more than anything symbolic effect of  
24 having facilities continue to shut down as the  
25 state goes out for new renewable energy. We think

1     that is certainly an important reason to keep the  
2     existing facilities operating.

3             Secondly in order to hit any kind of  
4     aggressive or even non-aggressive targets, there  
5     is a whole infrastructure that has been built up  
6     around the collection and delivery of biomass. If  
7     that were to go away, then that would also be a  
8     detrimental effect to achieving the targets that  
9     we put forth.

10            The second area of activity that we  
11     would propose for the CPUC in the near term is to  
12     initiate a proceeding or other mechanism that  
13     would reward biopower for the range of benefits  
14     that it provides in meeting the RPS.

15            We talk about this in the document, but  
16     those benefits include the ability to meet system  
17     resource adequacy needs, the strategically located  
18     biopower facilities that can eliminate some  
19     transmission constraints, as well as the RPS  
20     requirement.

21            The next set of actions are addressed at  
22     the Energy Commission and they deal primarily with  
23     its research development and demonstration  
24     activities, as well as education and outreach.

25            There are several indicators that

1 suggest, as Ryan mentioned, that there are a  
2 handful of emerging technologies that appear to be  
3 on the verge of commercialization. In addition to  
4 that, there are federal dollars, federal programs  
5 now that are in effect and becoming more  
6 widespread that allow the state to tap into a  
7 significant source of federal dollars to do  
8 research development and demonstration.

9 We think it is critical that the state  
10 in conjunction with the Biomass Collaborative and  
11 the Department of Energy fund a small number of  
12 demonstration and pilot projects to prove whether  
13 or not these technologies are truly commercially  
14 ready.

15 It may also be an excellent time to  
16 utilize some of the untapped biomass resources  
17 that are scattered around the state that exist  
18 near correctional facilities, and we think the  
19 Department of Corrections and Forestry can work to  
20 achieve.

21 Third, you know, fundamental I think and  
22 we believe to the enactment of any kind of biomass  
23 program is the establishment of a public  
24 awareness, a public education program. You know,  
25 at this point, the gap between the perception of

1 wind and solar energy as renewable resources and  
2 biomass is quite large. Generally the public  
3 perception is fairly negative on biomass, even  
4 though it does provide a number of benefits that  
5 are provided by wind and solar.

6 We think that with such a large biomass  
7 inventory, particularly here in California, that  
8 it does seem like the right time to create a  
9 public outreach and education program.

10 The next set of actions are directed at  
11 the California Air Resource Board. I guess the  
12 broad action would be a suggestion for the ARB to  
13 develop regulations and fuel specifications that  
14 offer maximum flexibility for the use of biomass,  
15 but without backsliding on environmental  
16 protection.

17 The ARB has initiated a proceeding, a  
18 rule-making proceeding, that would update its  
19 predictive model, and we think that some of the  
20 activities here could take place under that  
21 proceeding.

22 Actions that we would include or propose  
23 would be No. 1, to establish or propose some  
24 minimum yearly statewide ethanol consumption  
25 levels through 2020. Again, this would be in

1 support of an ethanol market, an in-state  
2 production market to show the commitment to  
3 ethanol and to show that there will be a market, a  
4 long term market for ethanol producers.

5 The second would be to conduct a  
6 comprehensive peer-reviewed study of the issues  
7 surrounding low level ethanol blends. It seems  
8 the low level blends are one of the more  
9 intractable issues that are facing the decision  
10 makers in this state, even though there appears to  
11 be general agreement that the permeation effects  
12 of low level blends is more of a transitory issue,  
13 and that as newer vehicles are enrolled, the  
14 vehicle fleet turns over, some of those problems  
15 go away.

16 An open dialogue on what this means to  
17 the future of ethanol and low level blends, we  
18 believe is very important to undertake right away.

19 Number 3, there also seems to be general  
20 agreement that E-85 is an acceptable fuel and that  
21 flex-fuel vehicles are an acceptable mechanism to  
22 utilize the fuel. However, the infrastructure  
23 that is needed for an E-85 platform are pretty  
24 significant and will require a lot of time. We  
25 don't think that this issue is going to be solved

1 in the near term, but we think that we should  
2 start to address it in the near term so that in  
3 the future, the E-85 infrastructure can be rolled  
4 down in California.

5 Also in addition to all of these  
6 activities, the necessary fuel specifications for  
7 the variety of biofuels and biodiesel blends.  
8 Again, this is to achieve maximum flexibility and  
9 the use of those fuels.

10 The next set of actions are for the  
11 Integrated Waste Management Board. They mainly  
12 address adjusting terminology and definitions that  
13 either do exist or don't exist in current statute  
14 to keep pace with technology advances.

15 We understand also that some of these  
16 may require legislation. Specifically, we would  
17 say that there appear to be certain definitions  
18 that in effect at the Waste Management Board that  
19 don't necessarily accurately represent the ability  
20 of certain new technologies called "Conversion  
21 Technologies" that are primarily non-combustion  
22 processes and they process municipal waste in an  
23 environmentally acceptable manner, and they would  
24 allow communities to achieve some diversion credit  
25 required by law.

1           If these conversion technologies, and I  
2   say "if" they are indeed commercially proven and  
3   acceptable and environmentally acceptable, they  
4   have a couple of added benefits. One is that they  
5   utilize municipal waste that is already collected  
6   at a single place. So, you don't get in an issue  
7   of delivery and collection with these wastes.

8           Second, conversion technologies create a  
9   number of different products. They create power,  
10   fuels, as well as chemicals. We think that broad  
11   reach of those technologies is certainly an  
12   important element of this plan.

13           We would encourage the Waste Management  
14   Board to work to enact some definitional changes  
15   to allow the development of those facilities.

16           The next set of actions are directed at  
17   the Department of Food and Agriculture and the  
18   Department of Forestry, and they are principally  
19   focused on the biomass resource. With forestry  
20   and agriculture representing about 60 percent of  
21   the total resource, we think that is an area that  
22   deserves some focus and concentration.

23           First we propose that there should be a  
24   greater effort to identify significant untapped  
25   and under utilized resources and determine what

1 would be necessary to get these resources to  
2 market.

3           Second, this would be for Food and Ag  
4 principally to address the question of resource  
5 optimization and highest value use. Although the  
6 data would suggest that there is enough of the  
7 biomass resource to support the targets and to  
8 support both end uses, biopower and biofuels,  
9 there may be some trade offs necessary and there  
10 may be some fuels and some resources that are more  
11 appropriate for one versus the other. We think  
12 identifying that would be very helpful to the  
13 process.

14           Another suggestion that has come forth  
15 is the creation of biomass enterprise zones, which  
16 would be targeted zones that are identified  
17 principally for their benefit in growing and  
18 harvesting biomass.

19           The next set of actions are directed  
20 broadly at the California state agencies, and it  
21 is the suggestion to implement a procurement  
22 program to purchase bio products as they can.  
23 Bioenergy produces a number of products that are  
24 in wide use by state agencies. While these uses  
25 may not dominate the market, they would certainly



1 move the needle we believe towards greater use of  
2 the product.

3 In addition to this, we would encourage  
4 the state to encourage local governments and  
5 public institutions to follow the State's lead.

6 The next set of actions are also broadly  
7 focused towards California agencies, and they deal  
8 with trying to leverage the state efforts in  
9 developing technology and market solutions.

10 For example, they would include  
11 supporting the extension of the Federal Production  
12 Tax Credits and to try to level the playing field  
13 for all renewable energy resources competing for  
14 those tax credits.

15 We would recommend that the state  
16 continue to work to support other initiatives such  
17 as the Western Governor's Association and the  
18 National Biomass R & D Initiative to influence  
19 federal dollars and to try to capture more of the  
20 federal dollars that are available within  
21 California because there actually are regional  
22 issues related to bioenergy, and certainly if a  
23 problem is solved in a state outside of  
24 California, it may or may not be appropriate for  
25 the California market.

1           Although it is tough to gauge the impact  
2   of these actions on bioenergy at the federal  
3   level, there could be substantial positive impacts  
4   in the near term

5           The last two actions are legislative  
6   initiatives, proposed legislative initiatives, and  
7   they have to do with funding incentives as well  
8   funding solutions.

9           Several stakeholders had pretty strong  
10   feelings that the state should not necessarily be  
11   supporting specific technologies, i.e. should not  
12   be technology prescriptive in the money that it  
13   provides for facility development.

14          We think that there are ways for those  
15   more advanced technologies to essentially find  
16   their way to the state support. Particularly in  
17   the case of those technologies that are  
18   commercialized. It will probably be necessary to  
19   offer some support to even the most advanced  
20   technologies for the near term in that regard.

21          The first suggestion would be expand and  
22   coordinate the use of existing state programs like  
23   the Pollution Control Financing Authority, the  
24   Dairy Power Production Program, and the Energy  
25   Commission's Supplemental Energy Payment's

1 Program. We would suggest looking at considering  
2 a range of possible tax credits that would include  
3 income tax credits, property tax credits, and  
4 particularly production tax credits at a state  
5 level. These credits should maximize the leverage  
6 of federal incentives.

7 We would also suggest the possible range  
8 of tax exemptions for biofuel, perhaps biofuel  
9 excise tax exemptions, sales tax exemption, income  
10 or property tax exemption.

11 One of the biggest obstacles that we  
12 have seen in the deployment of technologies that  
13 are becoming commercialized is the inability of  
14 either the developer or the lender to accept  
15 technology risk. Perhaps one low cost but  
16 effective way for the state to be involved in that  
17 solution but without providing the guarantee for  
18 the operation of that technology is to reduce the  
19 cost of the technology risk to the investor.

20 One way that appears to be viable would  
21 be through the use of efficacy insurance so that  
22 the appropriate entity, i.e. the insurance  
23 companies, can take the appropriate risk.

24 Finally, we think that establishing a  
25 system of carbon credits that are consistent with

1 the broader state policies on greenhouse gas  
2 reduction would certainly be something to  
3 consider.

4 We have saved the best for last, the  
5 funding sources, which we certainly recognize the  
6 funding sources are an essential ingredient to  
7 supporting the activities in this action plan.  
8 We've put some thoughts together for your  
9 consideration. We wouldn't suggest that we've  
10 conducted any in-depth analysis on any of these  
11 cost benefit analysis on any of these actions, but  
12 nevertheless, from the perspective of the funding  
13 principles, we do think that any source of funding  
14 put in place by the state should recognize that  
15 many of the benefits of bioenergy accrue to a wide  
16 swap of Californians. A cost of these initiatives  
17 should be similarly ascribed.

18 With that, I know we want to move into  
19 comments very soon here, so I thank you for your  
20 attention, and we look forward to hearing from  
21 you.

22 PRESIDING MEMBER BOYD: Thank you very  
23 much. I would first like to ask if anyone here,  
24 my fellow Commissioners or representatives of  
25 state agencies, would like to raise any questions

1 with the Navigant folks and their presentation.

2 Yes, Commissioner Geesman.

3 COMMISSIONER GEESMAN: First I want to  
4 say I think it is a terrific report, and I think  
5 it establishes a good framework from which all of  
6 the state agencies can address these challenges.

7 I am most concerned on the  
8 transportation fuel side. I am certainly  
9 appreciative of the replication of the 20 percent  
10 goal in the year 2020 that I think the Energy  
11 Commission and the ARB first adopted 2003, about  
12 two and a half years ago, in the AB 2076 Report.  
13 I am troubled though that there don't appear in  
14 the report some interim targets, the year 2010,  
15 for example, I think that we need to establish  
16 some benchmarks by which the current generation of  
17 political appointees and elected officials can be  
18 measured and some objectives that I think better  
19 capture the urgency associated with the petroleum  
20 displacement portion of this program.

21 The program I think quite legitimately  
22 is focused on making better use of our in-state  
23 resource, but if you go back to the AB 2076 Report  
24 and the Energy Commission's Integrated Energy  
25 Policy Report that was adopted this past fall, I

1 think you will see a focus on some out of state  
2 and frankly of of U.S. considerations that bring a  
3 greater level of urgency to petroleum displacement  
4 than state government thus far has been able to  
5 sustain.

6 I would really like to get a better  
7 sense of why there aren't some 2010 objectives  
8 that we ought to be focused on and whether or not  
9 those might be able to better capture the sense of  
10 urgency that I believe the California public  
11 shares about trying to reduce our petroleum  
12 dependence.

13 MR. GERMAIN: That's an excellent point.  
14 Thank you. I would just say that there are two  
15 parts that we probably could address, two areas  
16 where we could address it. One, we've suggested  
17 that the ARB come up with ethanol targets, at  
18 least annual ethanol targets, so it would  
19 certainly be appropriate to broaden that perhaps  
20 to the use of biofuels.

21 The other is that we do recognize that  
22 the 40 percent target and the two billion  
23 target -- the in-state production will likely  
24 shift over time. As you say, we will probably be  
25 looking at more out-of-state biofuels for the

1 short term, while in-state facilities are being  
2 erected. I appreciate the comment, and we can  
3 certainly address it.

4 CHAIRMAN DESMOND: Just as a follow up,  
5 again, I also want to add my compliments to the  
6 comprehensiveness of the report recognizing that  
7 there are many many ideas that were on the table.  
8 I think you did a great job here as a starting  
9 point. I am sure we will hear from folks today on  
10 elevating what should be Tier 1, maybe what is not  
11 and should be Tier 2, and some new ideas.

12 One of the things I want to make sure  
13 that would be useful for us is much like for  
14 consumers interested in investing in energy  
15 efficiency, they can go to the utilities website  
16 and get a complete comprehensive list of all the  
17 available efficiency programs, rebates and  
18 incentives. When we think about this, we need  
19 that same sort of information to understand where  
20 all the financing and grant programs that exist at  
21 the federal level so that a state, we should be  
22 developing this comprehensive data base of what  
23 sources of funding.

24 We certainly know what they are within  
25 California, but the President's new Alternative

1 Energy Initiative here is slating significant  
2 funding for these types of activities. I just  
3 want to make sure that part of the recommendation  
4 here is the development of that data base that  
5 identifies for the benefit of all agencies what  
6 the relevant federal incentive programs are.

7 MR. KATOFSKY: Rich and I were actually  
8 talking about that on the drive up this morning.

9 PRESIDING MEMBER BOYD: I think that is  
10 an excellent point. I think many of us probably  
11 made reference to the fact we need a little more  
12 information so we can dive a little deeper into  
13 the funding source issue. I would think as the  
14 Work Group, when it receives the final version of  
15 the report, proceeds to incorporate its  
16 recommendations and add recommendations that that  
17 is one that I agree I think it deserves a little  
18 more attention.

19 If I might, I'd just like to broach a  
20 question with regard to cellulosic ethanol  
21 production and the technology therefore. You made  
22 a comment that I've heard for decades, that we are  
23 on the verge. I have been standing on the verge  
24 for a long long time. I'm just wondering if you  
25 can elaborate a little bit more to perhaps make me



1     feel better about that we are truly this time on  
2     the verge of having the technological  
3     breakthroughs that will then break economic  
4     advantages to cellulosic, the use of cellulose in  
5     the area, in particular ethanol, but for other  
6     fuels as well.

7             MR. GERMAIN:  It is a very good  
8     question, and where on the verge we are is  
9     probably the most relevant is how far over do we  
10    need to go.

11            Just a couple of data points.  We know  
12    that there are some facilities that are in place,  
13    one in Canada, one in Louisiana, several others  
14    that are under development that are proposing to  
15    use not purely cellulosic ethanol, but cellulosic  
16    ethanol in addition to the feedstock crop, typical  
17    feedstock crop.  Those are not in production at  
18    the moment, but there are so many developmental  
19    activities that are taking place right now that  
20    would suggest that funders are looking at this,  
21    which is really the key is who is going to finance  
22    a project like this.  That it appears that we are  
23    "on the verge" and if we are five years away or  
24    ten years away, I think it is an excellent  
25    question, but it appears that there are a number

1 of activities right now that are pushing that  
2 along.

3 PRESIDING MEMBER BOYD: Chairman  
4 Desmond.

5 CHAIRMAN DESMOND: Thank you. One other  
6 question. I would like to see if you could expand  
7 a little bit more on the efficacy insurance that  
8 you have described. I want to be sure I  
9 understand the distinctions you are asking to deal  
10 with the technology risk. I want to make sure how  
11 is that different than -- are you referring to the  
12 actual performance of the technology itself or the  
13 ability to deliver the energy and having to make  
14 up the difference by posting other sort of market  
15 to market insurance requirements because they are  
16 two separate things. We are wrestling with  
17 similar issues on how do we get more renewable  
18 resources developed by lowering the insurance  
19 premium and can we pull that risk. So, maybe you  
20 can expand on that.

21 MR. GERMAIN: The typical liability  
22 insurance would not cover the risk of the  
23 technology. There is a fine line between  
24 performance, i.e. what is expected and that which  
25 the new technology, the risk that the new

1     technology adds. It is essentially an additional  
2     layer of insurance. It would be quite expensive,  
3     but it is another layer of insurance that would  
4     cover the risk of the technology operating, the  
5     operating part of the technology. So, again, it  
6     is additional coverage that is not available to  
7     traditional means of insurance at the moment.

8             PRESIDING MEMBER BOYD: Do you see this  
9     as substituting for some of the more traditional  
10    grants of government money for the full face value  
11    of a project that government or others could make  
12    an investment move the issue forward, pay a  
13    premium on insurance, but not necessarily make the  
14    typical subsidy payment or incentive payment that  
15    are so typical of government programs?

16            MR. GERMAIN: I guess my feeling is that  
17    with the typical subsidy payment, you don't have  
18    the kind of assurance that the project will be  
19    received as a commercially viable project and that  
20    it will be funded ultimately by investors and  
21    lenders. If you are thinking that most of the  
22    activity of bioenergy is going to take place at  
23    the private level, i.e. investment, to develop  
24    facilities will take place at the private level,  
25    it seems that looking at those areas, looking at

1 areas where lenders are willing to step up and  
2 take a certain amount of risk and investors who  
3 want to take up a certain amount of risk, but if  
4 there is a layer of risk that is not acceptable to  
5 lenders or investors and the state without putting  
6 a guarantee of its on on the line and absorbing  
7 essentially the full force of that technology  
8 risk, but paying the premium to allow the  
9 developer to proceed with the project, it seems  
10 like that is an appropriate use of state funds.  
11 It would not get into a situation where the state,  
12 if the technology didn't work, the state was  
13 handed an unfunctional advanced technology  
14 project.

15 PRESIDING MEMBER BOYD: Thank you. I  
16 thought it was a good suggestion. It is kind of  
17 stepping out of the box of typical government  
18 approach, although it is in the box of non-  
19 government funders and what have you. I think it  
20 is something I am sure we are going to want to  
21 explore a little more.

22 MR. GERMAIN: I would just add that at  
23 the moment, you probably can't call your local or  
24 any major insurance company and say can you give  
25 me efficacy insurance. It is something they have

1 offered, it has been offered, but it requires a  
2 little bit of creativity to put it in place.

3 PRESIDING MEMBER BOYD: Hopefully we  
4 will hear today from some folks who might want to  
5 elaborate in that arena. Any other comments or  
6 questions from members from the Working Group of  
7 the Navigant folks before I turn to just the  
8 general public?

9 (No response.)

10 PRESIDING MEMBER BOYD: Hearing and  
11 seeing no indication of that, I want to thank you  
12 very much for your presentation.

13 MR. GERMAIN: Thank you.

14 PRESIDING MEMBER BOYD: We will move to  
15 public comment, and I have a very healthy stack of  
16 blue cards up here. So, I look forward to an  
17 exciting and interesting day.

18 A few people have sent messages along  
19 that they have time constraints, and I will try to  
20 accommodate those people and move them up on the  
21 list of cards. If any of you who did not so  
22 indicate where you do have a time constraint, if  
23 you would let your Public Interest Office  
24 representative know, we will try to accommodate  
25 you as best we can. I will have to ask people --

1 I hate to put into effect time rules. I won't do  
2 that yet unless we get into desperate trouble, but  
3 I would urge people to be concise and so on and so  
4 forth. I am basically just going to take the  
5 cards in the order in which I received them  
6 unless, again, I got a indication from somebody  
7 that they have a serious time constraint and would  
8 like to be considered earlier rather than later.

9 With that, I'm going to turn now to the  
10 first individual who indicated they had a time  
11 constraint, Mr. Bill Jones, who is Chairman of  
12 Pacific Ethanol.

13 MR. JONES: Thank you, Mr. Chairman,  
14 members. It is a pleasure to be with you today,  
15 and I thank you for the opportunity to speak. I  
16 am Bill Jones. I am Chairman of Pacific Ethanol,  
17 a publicly traded renewable fuels company.

18 We are here in California. We are a  
19 California-based company. Prior to that time, I  
20 was in public life for twelve years in the State  
21 Legislature, eight years as a constitutional  
22 officer in California.

23 During that tenure, it became very clear  
24 that there were unique opportunities in California  
25 if we were able to cease and collect and define

1 the problems that continually arise in this state  
2 and then focus on a solution that dealing with one  
3 solution would allow us to positively affect a  
4 whole range of problems.

5 I believe the comprehensive biofuels  
6 policy, which is what this group is charged with  
7 developing, is an excellent place to start. To  
8 that end, the question or the problem that we are  
9 facing is the question of fuels. Not unlike the  
10 problem we faced a decade or so ago with respect  
11 with electricity and still struggling with. Fuels  
12 is the problem with the demand across the world  
13 with China, India, and others. We are all aware  
14 of that crisis.

15 How do we deal with that and why is it a  
16 problem. If we address it correctly, we can  
17 affect other problems in the process.

18 Specifically, the environmental benefits, which  
19 you point out and all of you are aware of with  
20 respect to biofuels, particularly my current  
21 involvement with ethanol allows us to take  
22 advantage of a dramatic reduction in greenhouse  
23 gasses, which is a major priority of the Governor,  
24 and do so while we are using the current  
25 distribution process that is out there, which is

1 the distribution of gasoline stations and the oil  
2 process itself.

3 By holding open low blends, we keep the  
4 opportunity without having to devise and develop a  
5 new distribution process for us to have renewable  
6 fuels in the tank for every car in California  
7 immediately. Going to the question that one of  
8 the panelists raised a moment ago with the  
9 consultant that was here, how do we get this done  
10 quickly. Should we have some short terms goals?  
11 Those are questions that need to be asked, and the  
12 public is asking those same questions.

13 Jobs, obviously the environment is first  
14 priority, but economic development is key. For  
15 every 40 million gallon plant for renewable fuels  
16 we build in California, we generate about 700  
17 jobs, very important for us.

18 Taxes. About \$1.7 million for the same  
19 plant for state and county taxes. Of course, an  
20 issue that was not current a few years ago, but  
21 had become more and more a focus of policy makers  
22 is energy independence and therefore energy  
23 diversity. We all know the problem we face with  
24 respect to that and clearly California is the  
25 fifth largest economy in the world that should be



1 looking at this problem, a nation/state rather  
2 than just a state, and energy independence is very  
3 critical for that.

4 Obviously, too, where we are placing our  
5 plants, world development is a problem. The  
6 Governor has a major initiative up and down the  
7 Central Valley, specifically dealing with the  
8 problems of unemployment, world development, which  
9 many of the people are working on and  
10 participating on.

11 The billion gallons that we currently  
12 use of renewable fuels in California, if we were  
13 able to develop and build facilities to produce  
14 those fuels in this state, we would be able to see  
15 about \$5.5 billion of economic development  
16 concurrently to go along with the production in  
17 state of those fuels.

18 Finally, new crops for agriculture is  
19 obviously an issue given the fact that we have one  
20 of the largest agricultural industries in the  
21 world. I would argue the best agricultural  
22 industry in the world.

23 The plants specifically that we are  
24 looking at building in California in Madera, just  
25 to give you an idea, that plant is under

1 construction and will be completed this fall.  
2 That plant when completed, will be the largest  
3 fuel refinery built in California in a generation.  
4 A generation that has seen this state go from 25  
5 million people to 37 million people, and this will  
6 be the largest fuel refinery built in a  
7 generation.

8 The challenge of building capacity and  
9 diversity and having distribution to deliver that  
10 at the same time is very important public policy,  
11 and I would argue a singular opportunity for  
12 policy makers to engage in.

13 Hydrogen Highway E-85 ethanol, all these  
14 are biodiesel stations are important, and we will  
15 see infrastructure built to allow Californians to  
16 engage in each of those over time. In the short  
17 run, domestically produced dry mill plants that  
18 are financeable by the current capital markets  
19 allow us to generate the benefits I just stated  
20 and allow the consumer to have a choice.

21 I've heard oftentimes people talk about,  
22 you know, the ethanol mandate that had many people  
23 in California, different points of view at  
24 loggerheads for a long period of time. Of course,  
25 that oxygenate mandate has been set aside, and we

1 have a renewable fuel standard nationwide now.

2 I would just argue that when the people  
3 of California pull up to a gas station today, they  
4 have a hydro-carbon fuel mandate staring them in  
5 the face today. They have no choice. In order to  
6 be able to utilize, again, the distribution and  
7 work with the oil companies to allow for those  
8 choices to be made, biofuels in the short run does  
9 provide that. I would argue going to a question  
10 that was raised a moment ago from the staff or to  
11 the staff from one of the panelists, the question  
12 of cellulosic ethanol is, Mr. Chairman, not too  
13 far away.

14 I appreciate your frustration. We've  
15 talked about that. We have also seen you and I  
16 some demonstrations that it is closer. We both  
17 know that. My argument would be that you can set  
18 all the programs, all the grant programs, all the  
19 incentives out there the state wishes, but unless  
20 there is a clear consistent policy from state  
21 government and a welcome mat out for renewable  
22 fuels and a distribution chain that is currently  
23 established that does not have to be built, you  
24 will not see capital be attracted to either corn-  
25 based ethanol or cellulosic ethanol on a long term

1 basis.

2 In fact, one might compare to some  
3 degree the problem we had with electricity a few  
4 years ago and not being able to move it from one  
5 part of the state to the other even though we  
6 could get it here because of the transmission  
7 lines. I think that reflects very clearly on the  
8 importance of distribution. Distribution is what  
9 we have today in the infrastructure that is there  
10 and using that distribution for low blends as we  
11 move along.

12 I would also like to just, you know,  
13 frame this out because as a public policy maker  
14 myself for many years, I heard people come before  
15 us in different capacities talking about, well, if  
16 we don't build them here, we will build them  
17 someplace else. We are currently building plants  
18 in Colorado that we were managing for others, and  
19 we are managing and building our own plants in  
20 Oregon. So, there are other options other than  
21 California.

22 Our company will build regardless  
23 because the demand is there. The opportunity, I  
24 think, that is so huge for us in California is to  
25 take and build and industry from scratch, to give

1 the people a choice.

2 Personally, as a person who has served  
3 four governors and four presidents in public  
4 policy arenas, I would argue that this unique  
5 opportunity to deal with the fuels issues,  
6 positively affect these other issues is singular  
7 opportunity that is historic and it is something  
8 that California should cease on aggressively.

9 A quarter of a billion dollars in  
10 investment, thousands of jobs, high-paying jobs,  
11 millions of dollars tax base from our investment  
12 from out company alone, just our company, is the  
13 type of activity, economic activity, and I believe  
14 environmental benefit can be derived from just one  
15 company. I think the opportunity for many to  
16 participate in this is clearly there.

17 I would encourage this group to take a  
18 comprehensive look. I think you are doing that.  
19 I appreciate and respect your effort. I think the  
20 Energy Commission, the reports that have been done  
21 on both the oil industry's comments with respect  
22 to renewable and the broader concept of what the  
23 Energy Commission has done is excellent. I would  
24 reference those documents to anyone that has not  
25 read them.

1           Finally, I would just like to support  
2   the recommendations in the California Renewable  
3   Energy Group, Renewable Fuels Partnership Group,  
4   they are going to speak right after me I believe  
5   or soon after me, and also the Cal Step Group.  
6   Both groups, very diverse, that have come together  
7   with the same charge that you have to try and  
8   bring options to the people and also I think  
9   specifically to talk about some of the technical  
10   questions with respect to the renewable fuels  
11   partnership that have been raised by the Air Board  
12   that may cause, at least in some people's minds,  
13   some challenges. I think they have done in  
14   assessing those questions and providing solutions  
15   or at least options for you to look at that I  
16   think in my opinion anyway from my analysis, puts  
17   those concerns in perspective. I think puts them  
18   in a position where they can be dealt with and  
19   allow us to take advantage of this huge  
20   opportunity.

21           Mr. Chairman, members I am pleased to be  
22   able to be with you today, and I thank you for  
23   allowing me to speak.

24           PRESIDING MEMBER BOYD: Thank you for  
25   your comments. Any questions from any members of

1 the Working Group?

2 (No response.)

3 PRESIDING MEMBER BOYD: Thank you very  
4 much.

5 MR. JONES: Thank you, Mr. Chairman.

6 MR. MENKE: I am John Menke with the  
7 State Water Board, and you mentioned new crops for  
8 agriculture in California. Any additional  
9 information you could supply on that, not  
10 necessarily at the current time, but providing  
11 that to the Working Group would be appreciated.

12 MR. JONES: We will supply that to you.  
13 Thank you very much, and specifically, sugar beets  
14 that are grown in a very arid climate are being  
15 discussed, dramatically using less water than the  
16 current beets that are out there, and then also,  
17 at least in our case, not just new crops, but  
18 crops that have historically have not been  
19 economical to grow here such as field corn,  
20 because the prices are not competitive that we  
21 would need as farmers to grow that you can import  
22 corn from the midwest cheaper, we strongly believe  
23 that a business model such as ours where we would  
24 reserve 20 percent of our total volume or in that  
25 neighborhood or something like that because ours

1 is irrigated versus the midwest which is dry  
2 farmed, gives that consistency and takes the ups  
3 and downs of the market, which allows you to pay  
4 more to a California grower for that consistency.

5 So, it is not just new crops, but it is  
6 the different business model that allows you to  
7 use some of the current crops that are currently  
8 are not economical to grow.

9 One other point on your water point.  
10 Please be aware that when you bring in this corn  
11 and these 110 car unit trains to California, they  
12 are coming anyway to feed the dairy herds. When  
13 you take wet distiller's grain out of the corn dry  
14 mill, those wet distiller's grain in our model go  
15 direct to the dairy herds, they are not dried.  
16 So, we save a third of the energy used in a  
17 midwest plant. Furthermore, that wet distiller's  
18 grain goes into a dairy ration, thereby replacing  
19 corn silage, which is grown on the dairy which is  
20 very water intensive to grow. You are pushing out  
21 of the ration maybe five acre feet of water that  
22 is now back in the mix to be used by the dairy for  
23 some other purpose, and that is a very big  
24 advantage to the wet distiller's grain concept,  
25 and one that is not often taken into account when



1     figured the total energy use of ethanol and  
2     developing it as a fuel.

3             Thank you, Mr. Chair and members.

4             PRESIDING MEMBER BOYD: Thank you very  
5     much. I am going to call next some other folks  
6     who have indicated time constraints. I am going  
7     to call on Gregg Morris of The Green Power  
8     Institute followed immediately by Ms. Julie  
9     Malinowski-Ball, and then Mr. Koehler.

10            MR. MORRIS: Thank you very much,  
11     Chairman, Commissioners. I am very pleased to be  
12     here today. I think we are looking at a very  
13     comprehensive report that gives a great deal of  
14     information about biomass in California. I think  
15     we will hear lots of very positive feedback over  
16     the course of the afternoon. I do, though, want  
17     to make a couple of what I consider to be  
18     important corrections to the report before I go  
19     much further.

20            First, there is a delineation of  
21     benefits of biomass energy that is in Section 3 of  
22     the report, and it was also presented as one of  
23     the slides today. While I certainly don't  
24     disagree with any of the benefits listed, I think  
25     the order of the benefits is exactly wrong. It

1 leads off with benefits like renewable portfolio  
2 standard, resource adequacy, petroleum dependence  
3 reduction.

4 While we very much want those benefits  
5 from biomass, the thing that makes biomass special  
6 is that it gives greenhouse gas reduction benefits  
7 that are not achievable in any other way, air  
8 quality benefits, forest health, and wildfire  
9 prevention, and all of the other lower listed  
10 benefits, which are unique to biomass, which are  
11 the rationale why biomass deserves public support.  
12 I believe those things should come off first.

13 By the way, those benefits accrue to any kind of  
14 productive use of biomass, so that is a good  
15 thing.

16 Secondly, a little later on page 28 of  
17 the report, there is a section called "Need to  
18 Commercialize New Technology" that says that to a  
19 great extent, the future success of bioenergy,  
20 particularly in California, depends on a number of  
21 emerging technology platforms that are at various  
22 stages of development. We are referring here to  
23 gasification pyrolysis, lignocellulosic ethanol.

24 I think I have good news for you,  
25 Commissioners. That is an incorrect statement,

1 and it is important that we correct this rather  
2 common misperception about biomass because I think  
3 it really is going to create a problem if we  
4 continue to say this.

5 Let me tell you what I am trying to say  
6 here. Biomass has a bright future in California,  
7 even if there is no further technological  
8 development. We have technology. It works. We  
9 are producing some 600 MWs of power right now from  
10 solid biomass, another 350 from gas biomass, and  
11 with proper policy framework, that industry can  
12 grow.

13 Don't take me wrong, I am not saying  
14 that new technology isn't useful. In fact, any  
15 new technology that can be brought into  
16 commercialization that can more cost effectively  
17 convert biomass to products will be better in the  
18 future than we have right now, but we don't have  
19 to wait for right off the future if that new  
20 technology does not make it to market in a rather  
21 short term way. Yes, we have been waiting for a  
22 number of these technologies for a long time. We  
23 can't count on them coming in right now. I think  
24 it is important that we can continue to nurture  
25 and grow our industry in the meantime.

1           What I think I'd like to see more of in  
2   this report and more of in a state biomass policy  
3   is focus. There is a million things in this  
4   report that we could do, all of which could bring  
5   great benefits to California. The problem is we  
6   have limited resources. I am not talking about  
7   biomass. We've got lots of biomass. I am talking  
8   money.

9           Everything we do costs money with  
10   biomass. That is why we need public policy. If  
11   it was the cheapest, easiest thing to bring to  
12   market, there would be no problem. We wouldn't  
13   have to sit here and figure out how to make this  
14   happen.

15           Given that we are going to be dealing  
16   with limited resources, I want to really encourage  
17   us to focus on things that we as a state can  
18   accomplish. I think in order to focus on that, we  
19   have to think about how do we measure what we've  
20   accomplished. I think it is really pretty  
21   straightforward, tons of biomass, cubic feet of  
22   biogas used productively.

23           We have lots of mandates in California  
24   right now including a renewable portfolio standard  
25   mandate for all renewable that says that we are

1 going to be 20 percent renewable in 2010. I'm  
2 about to submit to the Commission tomorrow a graph  
3 that shows, for example Pacific Gas and Electric  
4 Company, the utility that is certainly the  
5 purchaser of the majority of biomass energy in  
6 California, has no chance whatever to make 20  
7 percent in 2010. In fact, faces maximum fines  
8 every year beginning with 2005 through 2010 of \$25  
9 million a year. That is only because that is the  
10 cap on the penalty. If they were charged the full  
11 penalty amount in some of those years, it would be  
12 four to five times that much.

13 Mandates, targets, it is all good stuff,  
14 but it doesn't make things happen. What does make  
15 things happen is resources. Resources effectively  
16 applied. I have one suggestion of something that  
17 I know would work if we can put \$10 million a year  
18 into biomass beginning now on a 20 year  
19 commitment. Those 10 million a year would buy us  
20 a 100 MWS of new biomass generating capacity.  
21 That is with commercial technology. We know we  
22 can do it, that would be three quarters of a  
23 million bone dry tons per year of waste and  
24 residue biomass being used that is not being used  
25 today.

1           Where did I come up with that? I am  
2   assuming that the difference between everything  
3   available to a biomass project bidder to one of  
4   the RPS solicitations is about a penny to a penny  
5   and a half short to what it would take to make a  
6   new biomass facility happen. I am figuring about  
7   a penny to a penny and a half additional support  
8   put into specifically biomass projects would buy  
9   you 100 MWs of new projects.

10           That can be done, and it doesn't require  
11   new technology. I love new technology. I love to  
12   think that we could make electricity from biomass  
13   at 30 percent efficiency. I wrote a dissertation  
14   quite a few years ago, I don't want to give away  
15   my age, in which I thought that was the greatest  
16   thing in the future of biomass. It still might  
17   be, but here it is 2006, and it is still not in  
18   sight, not really, not if we want to make  
19   electricity by 2020. Certainly not if we are  
20   interested in 2010.

21           I urge you to focus our efforts here on  
22   things that we can really achieve. By really  
23   achieve, I mean getting biomass from the  
24   landfills, from the open burning piles, overgrowth  
25   out of the forest, put it to productive use, and

1 we can do that with current technology. Hopefully  
2 in the future we will be doing it with much better  
3 technology, but there is no need to wait, and  
4 there is certainly a great great risk is not  
5 continuing to nurture the current system that we  
6 have because if that were to go under, and we are  
7 losing biomass plants, how are we ever going to  
8 get financial institutions to fund new facilities.

9 I'd like to finish by saying absolutely  
10 yes, great support for public education. I think  
11 this is something that is long long overdue. I've  
12 been working in biomass, I don't know, I won't say  
13 how many years. Anytime somebody asks me what do  
14 I do, I never quite know what to tell them because  
15 if I say, oh, I work in biomass, they will sort of  
16 look at me like, huh? Yes, please, we must get  
17 the word out. This is a technology that brings  
18 unique and very valuable benefits. We have shown  
19 them to be more than 10 cents a KWh in  
20 uncompensated non-market benefits. That doesn't  
21 matter how you get that biomass into the market.  
22 Those are related to the use of the resource, not  
23 that the market that they enter.

24 We need the public support, and we need  
25 public agencies support to get this done. Thank

1     you.

2                 PRESIDING MEMBER BOYD:  Thank you,  
3     Gregg.  I was going to note, but you already did  
4     that you have been at this much longer than I  
5     have, and I won't reveal our collective ages.  
6     Thank you for making the point and reminding us  
7     that as said in the introduction, we are talking  
8     about biopower and biofuels.  My comments about  
9     standing on the verge relate almost more to  
10    cellulose to ethanol and the fuel component than  
11    it does to the power component, which you are  
12    right.  It exists and has for some time and there  
13    is plenty of technology.

14                Any questions for Gregg or any of the  
15    panel members?

16                (No response.)

17                PRESIDING MEMBER BOYD:  Thank you very  
18    much.

19                MR. MORRIS:  Could I say that it also  
20    exists for gasification, so I think it is exactly  
21    the same thing.  By the way, you don't have to  
22    choose what product markets this biomass goes to.  
23    I've often been associated with the electricity  
24    producers.  I'm an electricity guy, and I assure  
25    you all that if the electricity producers had



1 available to them technology to produce something  
2 else that was more cost effective, they would be  
3 the first ones to make that change. So, please  
4 keep that open mind. Thank you.

5 PRESIDING MEMBER BOYD: Thank you. Next  
6 Julie Malinowski-Ball followed by Tom Koehler,  
7 followed by John Boesel.

8 MS. MALINOWSKI-BALL: Can you see me  
9 back here?

10 PRESIDING MEMBER BOYD: We always see  
11 you, Julie.

12 MS. MALINOWSKI-BALL: I am vertically  
13 challenged at this podium.

14 PRESIDING MEMBER BOYD: But we look over  
15 a little.

16 MS. MALINOWSKI-BALL: Thank you. I am  
17 Julie Malinowski-Ball. I represent the California  
18 Biomass Energy Alliance. I am actually really  
19 excited to be here today. I can't believe there  
20 is an entire room full of people here at the  
21 Energy Commission talking about biomass. Thank  
22 you for joining me today. Usually it is just me.

23 I represent the existing biomass power  
24 producing facility, which is 28 plants operating  
25 in California. We, too, actually want to say

1     thank you to Navigant. You have a yeoperson's job  
2     on putting together this report in such a short  
3     time frame. I know we sat down with you for  
4     several hours one time and thought it would take  
5     you then another three months to disseminate the  
6     information we provided. Kudos to you, thank you  
7     very much.

8             We think you got it basically right. I  
9     mean there are some data points that we will go in  
10    and fix in our written comments, but, you know,  
11    you got it right. In fact, because of the  
12    information Gregg Morris just provided you, I  
13    really just want to go straight to focusing in on  
14    some of our comments on the recommendations.

15            Gregg was absolutely correct. We have  
16    to focus the recommendations on very specific  
17    action items. The biomass power industry is in a  
18    decline. We are losing two plants a year for the  
19    last five years.

20            How do we get out of this downward  
21    spiral. Whatever it is, it needs to be done now.  
22    We don't have time on our hands to do more  
23    research, to write more reports, and I don't think  
24    that is what this plan of course is asking us to  
25    do, but we really do want to make that clear.

1 Time is not on our side.

2 So, really when we are looking at the  
3 recommendations, we are looking at number one, how  
4 to actively seek to preserve the existing  
5 facilities and the company infrastructure. No.  
6 two, build on the existing base and actively seek  
7 to grow the industry. Three, focus limited state  
8 resources in this direction in an effective  
9 manner.

10 This, of course, is the focus on how we  
11 looked at the recommendations. So, basically, it  
12 comes down to three recommendations. The targets,  
13 targets are good. We would like to see the  
14 targets. The only way you are going to get to the  
15 targets is to identify a process. CBA strong  
16 believes that the only way you are going to get to  
17 these targets is through No. one, a biomass  
18 portfolio standard. We, therefore, suggest that  
19 Recommendation D-2 be amended to direct the PUC to  
20 open a proceeding to establish specifically within  
21 the renewable portfolio standard, a requirement  
22 that solid fuel biomass generating power  
23 constitute at least 15 percent of the state's RPS  
24 total requirement for generation of renewable KWh.

25 At the current overall RPS requirement

1 of 20 percent of the state's power, this would  
2 require the solid fuel biomass provide 3 percent  
3 of the overall state's generation.

4 The biomass portfolio standard would  
5 lead to approximately a 50 percent increase in  
6 California biomass power production generation,  
7 procured competitively and thus assuring that the  
8 most efficient lowest priced biomass power is  
9 added to the existing base, in addition to  
10 assuring the retention of the existing level of  
11 biomass generation.

12 Biomass portfolio standard would also  
13 accomplish all the goals that Navigant properly  
14 outlined for the PUC in Recommendation D-2.

15 No. two, we think that -- there  
16 currently is a proceeding going on over at the PUC  
17 on the short run cost would helps all qualifying  
18 facilities. We can't predict the outcome of the  
19 proceeding. It is very important to us. We are  
20 confident that the PUC will get it done in a  
21 timely manner, but, you know, if the outcome  
22 doesn't come out as we would like, it is essential  
23 that the public good charge that is collected and  
24 distributed by the CEC for all the biomass plants  
25 be maintained. In fact, it not only should be

1 maintained, the Governor should be directing the  
2 CEC to not only maintain it, but increase with an  
3 escalation over the years.

4 Frankly, the escalation of the fixed  
5 price subsidy is allowable under current statute  
6 and is justified by the fact that every business  
7 cost of biomass planned operations, such as  
8 medical, insurance, etc. increases with inflation.  
9 This would definitely help out the industry  
10 immensely.

11 Then we get to Number 3, legislative  
12 actions. We think actually first of all you  
13 should rue the sunset for the PGC funds. Then  
14 next we would look at long term funding, stable  
15 funding that was appropriately pointed out by  
16 Navigant in Recommendation 3.

17 We need to identify stable funding. The  
18 PGC Fund is one source. The other one, we have a  
19 suggestion out there that you look at a public  
20 goods charge surcharge on all trash bills paid by  
21 California waste disposers.

22 Since '89 with the passage of the  
23 Landfill Waste Diversionary Requirements, the cost  
24 to the Waste Management Board have been met by  
25 small surcharge on trash bills for all

1 Californians. Since the non-electric  
2 environmental benefits of the biomass industry, as  
3 outlined in the plan, are enjoyed by all  
4 Californians, a small surcharge on everyone's  
5 trash bill appears justified.

6 We are thinking a small surcharge in the  
7 range of 25 cents to 50 cents per month per bill  
8 and could be distributed to biomass plants as a  
9 fuel-based subsidy. The administration could be  
10 done by the CEC or the Waste Management Board.

11 The surcharge is also in accordance with  
12 Public Utilities Code Section 389, which  
13 highlighted the importance of cost shifting in  
14 order to preserve and expand the biomass industry.

15 Those are our three recommendations, a  
16 biomass portfolio standard, continuation of the  
17 PGC Funds with escalation, and a charge in  
18 everyone's waste bill.

19 No. 4, we have to say, yes, to public  
20 education, public education, public education. In  
21 fact, let's just start with our public policy  
22 makers. I'll tell you what a normal meeting is  
23 with public policy makers on biomass issue. They  
24 invite me into their office, and they want to hear  
25 about biomass, tell me about biomass. I explained

1 to them all of the benefits that are outlined in  
2 here. Oh, yeah, I get it. I like that. Then I  
3 will, do you agree that the state should be doing  
4 something about it? Yeah, we should be doing  
5 something about it, this is a good deal, this  
6 benefits all Californians, we should have more of  
7 this. Well, here is how you go about doing it.

8               Next, I am escorted out of the office.  
9 That is a typical meeting I am sorry to say. So,  
10 here it is before you today, you have been given a  
11 list of benefits. You are here because you agree  
12 these are good and agree that the state has a  
13 stake in it. I think you agree the state should  
14 do something productive about it.

15              Now are you ready to take the  
16 appropriate steps and make the tough decisions?  
17 Thank you very much for your time.

18              PRESIDING MEMBER BOYD: Thank you. Any  
19 questions of Julie?

20              (No response.)

21              PRESIDING MEMBER BOYD: Thank you,  
22 Julie, you persevere. Tom Koehler who will be  
23 followed by John Boesel and then followed by a Mr.  
24 Loren Hov if I am pronouncing the name right. Tom  
25 Koehler representing Renewable Fuels Partnership.

1           MR. KOEHLER: Chairman, members of the  
2 task force, I appreciate the opportunity to  
3 testify today. I am representing the California  
4 Renewable Fuels Partnership, which a coalition of  
5 ethanol producers, agricultural interests,  
6 environmental groups, local governments.

7           I want to just touch on a few items on  
8 the air quality issues because that seems to be a  
9 potential stumbling block, and I think the issue  
10 deserves perspective. I have nothing but respect  
11 for the Air Resources Board, and I think new data  
12 is showing that there is a way to proceed that can  
13 really be a win/win for all, and that it is  
14 important to take a look on this policy  
15 perspective a wholistic policy.

16           I think the first issue of importance is  
17 to realize that ethanol today is providing 3.5  
18 million tons of Co2 reductions per year. This is  
19 a figure that was given to the ARB at their  
20 request by Tiax.

21           This represents the single most  
22 effective, largest source of Co2 reductions in the  
23 transportation sector today. From an air quality  
24 Co2 perspective, this is absolutely a year-round  
25 and very good program. A year-round E-10 would



1     reduce more than six million tons of Co2 per year.

2             In this regards, I would say that the  
3     Pavley Bill and the Governor's recommendations  
4     really have been half fulfilled. We've done a  
5     great job, and the ARB has done a great job of  
6     instituting a Co2 regulation for vehicles  
7     themselves. As we all know, it takes fuel and the  
8     vehicle, and so currently in today's climate,  
9     there are no Co2 regulatory mechanisms for our  
10    fuel regulations. I would suggest that needs to  
11    change. That change in itself would be a huge  
12    driver for biofuels in this state.

13            This a graph that you have all seen  
14    before and it puts it in perspective. The ARB has  
15    a long standing tradition that fuels and cars are  
16    one system and that system creates reductions.  
17    What this is telling us is that the red line is  
18    potential permeation emissions that is the best  
19    guess of ARB today. I think that figure keeps  
20    getting changed for right reasons because it is  
21    very very hard to actually come up with the right  
22    number.

23            What I want to do with this figure is to  
24    show --

25            PRESIDING MEMBER BOYD: Excuse me for

1 interrupting you. Is there some way to dim the  
2 lights. There we go. Thank you, Jerry. It was  
3 hard for us if not impossible almost to see that  
4 graph. Thanks.

5 MR. KOEHLER: Good. It is an important  
6 graph, so I am glad we can all see it. What this  
7 figure shows is that system, the fuels and the  
8 cars are working. It is working with ethanol in  
9 the gasoline, and it is working without ethanol in  
10 the gasoline.

11 Today we have fewer emissions, total  
12 emissions that we did when MTBE was banned. We  
13 are continuing that decline of emissions. The  
14 argument if you will, if you want to call it that,  
15 on some of these issues back and forth are how  
16 fast of a decline are we talking about. It is not  
17 whether emissions are increasing, there are no  
18 increasing emissions here. Emissions are going  
19 down.

20 Then we have the perspective of, okay,  
21 well, so we've got these models and, you know, you  
22 have as many different models and interpretations  
23 as you do grains of sand it seems like, and they  
24 all say different things. What is actually  
25 happening to the air quality?

1           In 2004 and 2005, we had the best air  
2   quality on record in this state. Ethanol did not  
3   cause that good air quality, but it potentially  
4   suggests that maybe our models are not perfect  
5   because if our modeling, the modeling that is  
6   showing all these increases were true, I don't  
7   think we would see the great air quality that we  
8   have.

9           The actual facts on the ground call into  
10   question maybe that there are some uncertainties  
11   in these models. All you can do is do the best  
12   you can, but I think it is good to understand that  
13   there is a certain amount of uncertainty in these  
14   models.

15           Here is some new data, and the new data  
16   is suggesting that carbon monoxide is very  
17   important in reducing ozone and offsetting  
18   permeation. There was a study recently done at  
19   the request of Secretary Lloyd while he was still  
20   there to see what the reactivity of carbon  
21   monoxide is under conditions that we are trying --  
22   under the Federal Eight Hours Ozone Standard,  
23   which is our whole program is geared to reduce.

24           That study recently released I believe  
25   in draft form by the ARB is showing that CO is 35

1 percent more important in reducing ozone than is  
2 currently in the existing predictive model. Hold  
3 that thought for a second. The other piece of new  
4 data out there is this new auto-oil CRC 67 study,  
5 which shows significant reductions of carbon  
6 monoxide from ethanol in the newer cars. The  
7 current predictive model has no CO impact from  
8 ethanol in the newer cars.

9           If you combine those two together, you  
10 use the existing equations that are in the  
11 predictive model. It shows the E-10 can reduce  
12 over 70 tons of VOC equivalence per day compared  
13 to non-oxygenated fuel. That is good news, and I  
14 think suggests certainly a pathway to get over the  
15 hump on some of these issues.

16           Model uncertainty. Talked about it  
17 before and want to touch upon it again. This  
18 quote comes from this new study that was done by  
19 the CRC, which is a highly respected group. I'll  
20 just read it to you. You can read it yourself.  
21 The results of the literature show some tendency  
22 for Nox emissions to increase with greater ethanol  
23 blends, but this trend is not consistent or  
24 statistically significant over a wide range of  
25 studies.

1           I think that is an important thing to  
2   ponder because essentially this Nox issue is one  
3   of the main issues that is preventing this state  
4   from using more biofuels. We have a model that is  
5   contradictory to what this new study is saying. I  
6   just think that we need to take a look and  
7   acknowledge these uncertainties and then make  
8   policy towards this because no model is correct,  
9   as my good friend Steve Brisby says often, some  
10  are useful. To the degree that our current model  
11  is preventing more biofuels from being used, I  
12  would say that it is not useful. We need to  
13  adjust it.

14           From a suggestion standpoint, what is  
15  needed to spur the biofuels industry in this state  
16  is a regulatory framework that provides real  
17  flexibility for refiners and marketers to use more  
18  ethanol and insures no backsliding from the  
19  current use. I would suggest no backsliding from  
20  the current use today, no backsliding on the  
21  amount of Co2 that is being reduced from the fuel  
22  sector today.

23           Year round flexibility to use anywhere  
24  between 6 percent and 10 percent ethanol at the  
25  refiners choice like the rest of the country does

1 is an absolute necessity. There has been talk  
2 about not using ethanol, banning it in the summer  
3 months, and that would be absolutely disastrous,  
4 and there would be no more plants built in this  
5 state if that were the case.

6 You cannot build plants based upon a  
7 seasonal market. It would be disastrous or nor is  
8 it necessary. I hope that some of these facts  
9 that I've shown you have helped in that regard.

10 A Co2 fuel regulation, I've chatted  
11 about, I believe would be one of the best policy  
12 drivers for cellulosic ethanol because cellulosic  
13 ethanol has much greater Co2 benefits than  
14 traditional starch. The best way to get those  
15 online and bring those into the state is through a  
16 Co2 policy that acknowledges those benefits.  
17 Without a Co2 mechanism in the fuel regulation,  
18 then cellulose looks no different than starch.  
19 It is highly consistent with what the Governor has  
20 been asking, and we should do it in our fuel  
21 regulation.

22 Lastly, short term actions are very  
23 necessary. The Navigant report has a 2020  
24 recommendation. I believe that we need to have a  
25 2007 recommendation that coincides and harmonizes

1 with the current fuel regulatory activities that  
2 are going on. I believe that we need a 2010  
3 recommendation because if we just put things out  
4 there too far out, it really has no meaning to  
5 what will spur investment and send signals to the  
6 market.

7 I am happy to answer any questions if  
8 there are any.

9 PRESIDING MEMBER BOYD: Thank you. Any  
10 questions for Mr. Koehler?

11 PRESIDING MEMBER BOYD: Yes.

12 MR. MENKE: I've got both a comment and  
13 a question. I'll give you the comment first. We  
14 are hearing some presentations from companies that  
15 are involved in developing marketing biomass, and  
16 I don't know that we've got a convenient website  
17 that can be used by everybody here to contact  
18 those companies. I would like to encourage the  
19 Working Group and Navigant to develop such a  
20 website if it doesn't exist.

21 A question for you. On the greenhouse  
22 gas credits, are there currently credits available  
23 in California for reduction of greenhouse  
24 emissions through the use of biofuels?

25 MR. KOEHLER: There are, and Dean can

1 touch on them. It is highly indirect, so it is  
2 nothing like a direct credit for the fuels.  
3 Dean -- yeah.

4 MR. SIMEROTH: I'm sorry, I missed the  
5 question.

6 MR. KOEHLER: What Co2 credits are  
7 available today for fuel providers?

8 MR. SIMEROTH: If the vehicle is a  
9 dedicated vehicle, it means it can only use the  
10 alternative fuel, that is a direct credit. If it  
11 is a flexible fuel vehicle and you can show that  
12 the flexible fuel vehicles are using the  
13 alternative fuels, that is also a direct credit.

14 MR. KOEHLER: But the 3.5 million tons  
15 that are being reduced today, do the oil companies  
16 get any credit for that?

17 MR. SIMEROTH: The atmosphere certainly  
18 is.

19 PRESIDING MEMBER BOYD: Okay, no other  
20 questions. Thank you, Mr. Koehler. I've got an  
21 appeal from a gentleman here that says he's got a  
22 serious time constraint, so I am going to call  
23 upon him. Then from this point forward, I am  
24 pretty much going to have to just take the cards  
25 as I have them because there is a lot of cards



1 here. Pretty soon, everybody is going to have a  
2 time constraint, including this panel I think.

3 Mr. Scott Wetch, if I am pronouncing it  
4 anywhere near right.

5 MR. WETCH: Wetch.

6 PRESIDING MEMBER BOYD: Wetch. Well, I  
7 wasn't even close. That is a "W" okay.

8 MR. WETCH: Commissioner Boyd and fellow  
9 Commissioners, I appreciate the accommodation. We  
10 are involved in some bond issues across the street  
11 that I need to get back to, so I appreciate that.  
12 My name is Scott Wetch, and I am here today on  
13 behalf of the California State Pipe Trades  
14 Council, the State Association of Electrical  
15 Workers, and the Western State Council of  
16 Sheetmetal Workers to voice our strong support for  
17 the recommendations outlined in the Bioenergy  
18 Action Plan for California.

19 We believe that a strong biofuels policy  
20 will create thousands of new jobs in the  
21 California economy. California could be the  
22 leader nationally and create over 20,000 jobs if  
23 we produce over one billion gallons of biofuels in  
24 this state.

25 The building trades are very supportive

1 of an aggressive biofuels policy in California and  
2 believe that California should aggressively  
3 increase the amount of biofuels that California  
4 already consumes.

5 We believe that the Bioenergy Task Force  
6 should recommend a minimum renewable fuel standard  
7 that insures no backsliding from our current use  
8 of ethanol and increases its usage in an  
9 aggressive yet responsible way.

10 In our view, California has an  
11 opportunity to be a national leader and create an  
12 industry that will create new and good paying  
13 jobs, reduce fuel price volatility, and protect  
14 the environment, and significantly reduce our  
15 state's dependence on foreign oil.

16 Unless California acts now, we will lose  
17 out to other states that are aggressively changing  
18 its policies to increase the use of ethanol and  
19 other biofuels. So, on behalf of a significant  
20 portion of the building trades and the  
21 construction industry, and from a sector that has  
22 been traditionally employed in the refineries and  
23 the traditional fossil fuel area, we believe that  
24 this is the wave of the future and a way to  
25 reinvigorate our sector, and as a result, we are

1 very supportive of the recommendations.

2 I, again, thank you for your  
3 accommodations.

4 PRESIDING MEMBER BOYD: Thank you very  
5 much. Any comments or questions?

6 (No response.)

7 PRESIDING MEMBER BOYD: Thank you. Now  
8 I indicated, Mr. John Boesel, Cal Start, Mr. Hov,  
9 and then Mr. Phil Reese.

10 MR. BOESEL: Thank you, Mr. Chairman,  
11 members of the task force, and the Energy  
12 Commission. I very much appreciate this chance to  
13 share the views of Cal Start today with you on  
14 this very important matter.

15 I think what we are talking about today  
16 very much is in support of the Energy Report and  
17 the AB-2076 goals of having 20 percent of our  
18 transportation energy come from alternative fuel  
19 sources by the year 2020.

20 I don't see and we work in the  
21 alternative fuel every day, and I don't see any  
22 way of us getting there without having biofuels be  
23 a major element of the program.

24 I think so the recent advertising  
25 campaign by Chevron has reinforced the need for

1 California to move ahead with those goals. They  
2 ask that or should we be concerned about  
3 consuming. The fact that we are consuming two  
4 barrels of oil for everyone that we find. I think  
5 everyone in this room will say the answer is yes.

6 There is no silver bullet as we try to  
7 answer the question. We look at the various  
8 alternative fuels, and we find ones that are both  
9 low in emissions and also reduce greenhouse  
10 gasses. It is clear that biofuels have to be a  
11 major part of the puzzle.

12 With transportation representing more  
13 than 60 percent of California's Co2 emissions, we  
14 have to allot on the transportation side, and that  
15 is both on the vehicle side and the fuel side to  
16 reach the Governor's very aggressive and  
17 impressive goals in terms of greenhouse gas  
18 emissions.

19 I'd like to go over our recommendations  
20 now. One is to support the recommendation that  
21 was in the Energy Report and, again, in the  
22 Navigant report for a 10 percent renewable fuel  
23 standard for gasoline. I think we should  
24 challenge the state's chemical engineers to figure  
25 out how do we keep that 10 percent renewable

1 element and not have emission increase over what  
2 they are today.

3 It just seems to us that there is a  
4 technical challenge here that can be overcome, and  
5 we ought to put our best minds at work in trying  
6 to make that happen.

7 I want to reiterate something that Tom  
8 Koehler said is that everytime in the past when  
9 the Air Resources Board, which has done just an  
10 incredible job, has tackled an emission, we've  
11 looked at the vehicle side and the fuel side.  
12 We've done that with a very good program on the  
13 vehicle side. We also need now a fuel program.

14 Tom Koehler also put up this slide,  
15 which was prepared the Energy Commission and that  
16 the magenta line shows sort of the worse case  
17 impact of low ethanol blends and the projection  
18 for the overall reactive organic gas emissions  
19 coming from the transportation sector. I think we  
20 need to be able to weigh the impact of the low  
21 blend ethanol here with the benefits in terms of  
22 greenhouse gasses, reduce dependence on petroleum,  
23 and the tremendous economic development potential  
24 for the State of California.

25 As with gasoline, I think we also need

1 to be looking at a renewable standard for  
2 biodiesel, and I support the recommendation by  
3 Navigant in this regard. I am very impressed with  
4 what I am hearing from the automotive industry.

5 At a recent symposium here held by the Bosh  
6 Corporation in Sacramento, Daimler Chrysler came  
7 out and said we support the use of biodiesel up to  
8 5 percent, but we do need a clear and consistent  
9 standard to make sure we are not getting bad  
10 batches.

11 If a federal effort is lagging in this  
12 regard, I would encourage the state to move ahead  
13 with its own interim standard as it has in so many  
14 other areas so that we can move the ball forward  
15 and start using biodiesel in greater quantities  
16 here in California.

17 We should also make full use of  
18 biomethane and biogas, and that is why I think  
19 this Interagency Task Force is so helpful because  
20 we have the Water Board and others involved here.  
21 Methane is both a valuable source of fuel, but  
22 also very destructive greenhouse gas.

23 I am posing this as a question, not  
24 necessarily as a recommendation, but we have  
25 renewable standard for electricity. Should we

1 develop a renewable standard for methane use in  
2 the State of California.

3 Every waste treatment in this state  
4 should be required to capture the methane and to  
5 use it to generate electricity as a transportation  
6 fuel. A number of the sanitation districts now in  
7 the state or doing this, including LA Sanitation,  
8 but are we capturing all that methane from those  
9 sanitation districts. If not, we ought to be.

10 Also I would encourage the new CEC  
11 Natural Gas Vehicle Research and Development  
12 Program to focus on the development of renewable  
13 methane in the transportation sector. We have  
14 been working with groups in Sweden, 45 percent of  
15 the methane used in commercial and residential  
16 applications in Sweden, come from biological  
17 sources.

18 Lastly is really the development of a E-  
19 85 network, 85 percent ethanol. We could call  
20 this the renewable roadway to compliment our  
21 effort in the hydrogen highway. Remember you  
22 heard that term first here.

23 The state allocated 6.5 million for the  
24 development of the hydrogen highway in 2004. A  
25 relatively small investment, but shouldn't we be

1 investing similar amounts at least in this E-85  
2 network.

3 This is, again, I think an area where  
4 this state needs to walk the talk. The state has  
5 thousands of flex-fuel vehicles, but none of them,  
6 zero, run on ethanol or E-85. Can't we make some  
7 small simple steps of simply installing E-85 pumps  
8 in the state garages. If the state could start  
9 doing this, this would be a tremendous example for  
10 other fleets around the state.

11 We recommend that the Secretary of State  
12 and Consumer Services be directed to provide a  
13 report by December 1 of this year of how this can  
14 occur, and that we insure that our flex-fuel  
15 vehicles in this state and I should say our bi-  
16 fuel vehicles, ones that run on gasoline and  
17 natural gas, let's develop a plan to insure that  
18 they are running on alternative fuels 90 percent  
19 of the time or better.

20 This is one of those days when I think  
21 the rest of world is watching California because  
22 if we move ahead here, others will follow.  
23 Minnesota has already taken the lead in this  
24 effort. It would be nice to catch up with them  
25 and then go beyond.



1           I appreciate you taking the time and  
2   listening to my presentation and considering our  
3   recommendations.

4           PRESIDING MEMBER BOYD:   Thank you, John.  
5   Any questions of Mr. Boesel?

6           (No response.)

7           PRESIDING MEMBER BOYD:   Thanks very  
8   much, John.   Mr. Loren Hov, if I am pronouncing  
9   the name correctly.   To be followed by Mr. Phil  
10   Reese, then Mr. Chris Trott.

11          MR. HOV:   Thank you very much.   The  
12   pronunciation is Hov, there is a little village in  
13   Norway with the same name.   I feel very frequently  
14   when I travel around this country that I am a  
15   partial owner of a lot of Hov Lanes throughout the  
16   country.

17          (Laughter.)

18          MR. HOV:   Is it possible we could have  
19   the lights back on.   My vision is not all that  
20   good.   I had a detached retina a few months ago.  
21   Thank you, very excellent.

22          I want to digress slightly.   Can you  
23   hear me in the back?   I was sitting in the back,  
24   and I could barely barely hear.   Okay.

25          I want to particular thank all the

1 speakers ahead of me to really set up my main  
2 point. More efficiently utilize the sun's energy  
3 to produce more biomass per acre.

4 This reduces cost in price. For corn  
5 and its stalks for instance, you would come even  
6 closer or even perhaps get below the cost of oil  
7 and natural gas.

8 I am Loren J. Hov of Sacramento, a  
9 California licensed professional engineer for over  
10 forty years. I worked for a Fortune 500 chemical  
11 company for over thirty years, the last fifteen  
12 first as Director of Manufacturing for their  
13 Agriculture Chemical Division, sixteen plants, and  
14 then Director of Energy Management for the  
15 Corporation, 64 plants.

16 I hold many patents in diverse fields  
17 and have had my own consulting business for a  
18 quarter of a century. I am also currently a  
19 manager or principle of several start-up  
20 companies, all involved in energy and its  
21 conservation. Also since I was about eight, a  
22 very frustrated farmer.

23 In the 1970's, bio-active organic  
24 chemical compounds were discovered that regulated  
25 or altered the growth rate of plants and trees

1 without genetic alteration, just a fertilizers do.  
2 Very recently more outstanding compounds have been  
3 found that in tests greatly increased germination  
4 and rate, growth, and production. All of these in  
5 normal and stressed soils. Little if any has been  
6 published about these compounds being very new and  
7 proprietary.

8 For example, corn production per unit  
9 area in years and plant biomass has increased,  
10 which should increase potential ethanol and  
11 electricity per unit area planted. This has also  
12 been demonstrated for rice, cotton, soy beans, and  
13 I would add recently tomatoes. Tests are under  
14 way for the coast redwood trees, Sequoia  
15 Sempervirens, and the African Oil Palm, which is  
16 currently being used in Asia for biodiesel  
17 production. Such tests do take time.

18 There is new technology and other  
19 technologies for bioenergy increase to reduce  
20 costs are probably out there. The California  
21 Energy Commission should be well aware that new  
22 technologies are coming and further support them  
23 in Tier 1 and Tier 2 actions.

24 Although new technology support is  
25 frequently mentioned and discussed and the

1 recommended actions, some other than the obvious  
2 might be expanded such as the last item of the  
3 Tier 1 draft 3.b.5 establish a system of carbon  
4 credits consistent with broader state policy on  
5 greenhouse gas reductions. Since carbon dioxide  
6 is the magic good and bad gas in the crop-to-  
7 bioenergy cycle, I don't know how we answer this  
8 point.

9 It should also be apparent there were  
10 multiple benefits to be derived from increased  
11 technology which reduces cost. I intend to  
12 elaborate much further in a written submission to  
13 the Commission, and I thank you very much.

14 PRESIDING MEMBER BOYD: Thank you very  
15 much. Any questions?

16 (No response.)

17 PRESIDING MEMBER BOYD: Thank you, sir.  
18 Phil Reese, Comac Energy.

19 MR. REESE: Good morning, my name is  
20 Phil Reese. I am a principle of Comac Energy as  
21 well as the Chairman of the California Biomass  
22 Energy Alliance. The Energy Alliance represents  
23 all 28 of the operating solid fuel biomass energy  
24 plants. In the on-going negotiations with PG & E,  
25 relative to contract terms, the Biomass Energy

1 Alliance also represents the landfill gas  
2 generators of California.

3 I'd like to start off by thanking the  
4 Navigant guys for listening and creating a truly  
5 accurate picture of the current industry and its  
6 dire straights.

7 Comac Energy is the newest large biomass  
8 plant in California. We have been running  
9 fourteen years. It is the largest because we  
10 generate more MW hours per year than any other  
11 single biomass plant in the country. We are the  
12 single largest user of urban wood wastes, which I  
13 will point out are not MSW. I would like to  
14 suggest in the report that the three categories of  
15 biomass feedstocks be expanded to four to include  
16 urban wood waste as differentiated from MSW.

17 MSW is different legally and regulatory  
18 wise. The existing solid fuel biomass plants do  
19 not burn MSW, but wood wastes and in our case,  
20 urban wood waste diverted from landfills.

21 Our plant is the most efficient in the  
22 country measured in terms of BTUs per KWh, largely  
23 because it is the most modern. As the most  
24 modern, our plant is the most tightly regulated in  
25 terms of emission rate limits, and we have been

1 running fourteen years without a single violation  
2 of any of our permit limits.

3 I say this not so much to brag about our  
4 plant, although I am pretty damn proud of it, it  
5 is that existing technology can meet very  
6 stringent environmental regulations.

7 I stand ready right now to expand my  
8 existing plant or to build a new one adjacent or  
9 somewhere around. Our plant is the only one in  
10 Southern California of all the 28 operating  
11 plants. We are in the midst of probably ten to  
12 twelve million tons per year of urban wood waste.  
13 We burn about 400,000 tons a year, a little over  
14 1,000 tons a day.

15 I want to make these remarks as a  
16 further focus to the focus emphasis that Gregg and  
17 Julie suggested to you. I want to state that the  
18 focus has to be on contracts, financable, long  
19 term contracts with a financeable entity.

20 The biomass energy industry in  
21 California that exists today was created by a  
22 single thing, the availability of long term  
23 contracts at prices sufficient to build and  
24 operate the plants. With those contracts in hand,  
25 all of the biomass alliance members secured

1 financing, they navigated the environmental  
2 process of California, they obtained permits, they  
3 accepted the risk of construction and operating.  
4 They created from nothing the fuel supply  
5 infrastructure, and today there are 28 plants  
6 still operating out of the 61 that were  
7 constructed in California.

8 Now don't assume that all 61 operated at  
9 one time. In the 1993/1994 time frame, we had a  
10 maximum of 49 plants operating, generating nearly  
11 900 MWS of baseload electricity. Today, and I  
12 would like to correct the number in the report, it  
13 is 555 MWS of baseload electricity, and that  
14 represents almost exactly a 40 percent decline in  
15 the industry from its peak about ten years ago.  
16 That report says 20 percent, but I think that is  
17 just a calculation oversight.

18 The Biomass Portfolio Standard that  
19 Julie outlined for you is our suggestion that  
20 would lead to first solicitations by the utilities  
21 for biomass power, competitively procured under  
22 competitive solicitations. The winners would be  
23 awarded long term financeable contracts, which is  
24 the single focus and the single key for growing  
25 the biomass industry.

1           Finally, the continuation of the Public  
2   Goods charge funded subsidy by the Energy  
3   Commission is a virtual necessity to prevent even  
4   further decline in the operating biomass plants.  
5   I want to emphasize we've lost ten plants since  
6   1999, 117 MWs of baseload power all closed for  
7   economic reasons, not environmental reasons, not  
8   fuel supply reasons, economic reasons.

9           In spite of the support provided by the  
10   Energy Commission, the rising costs of operation  
11   have caused those plants to close.

12           Lastly, I'd like to speak to one item  
13   that was not recommended in the report. I  
14   mentioned that the biomass plants are paid energy  
15   prices based on gas-based avoided costs. The  
16   utilities claim that under the contracts we have  
17   with those utilities, that they own the renewable  
18   energy credits that are presumably generated by a  
19   renewable generation. The contracts were executed  
20   years ago when there was no such thing as  
21   renewable energy credits, or RECs.

22           Since we are paid on gas-based avoided  
23   costs and the change in the regulatory environment  
24   has led to a renewable portfolio standard,  
25   something that did not exist fifteen or twenty



1 years ago, it seems fair that the renewable  
2 generators, including the biomass plants, should  
3 be allowed to sell their renewable energy credits  
4 if a market exists for them as a result of some of  
5 the utilities needed additional renewable  
6 generation to meet the RPS.

7 Thank you very much.

8 PRESIDING MEMBER BOYD: Thank you. Any  
9 questions?

10 MR. MENKE: I do have a quick question,  
11 are you getting any credit for your diversion of  
12 waste from landfills?

13 MR. REESE: What a straight man. The  
14 answer is no. Now let me take four or five  
15 sentences to answer that.

16 Riverside County in which our plant  
17 operates does not quite meet the 50 percent  
18 diversion, but our plant alone is responsible for  
19 about nine percentage points of their diversion to  
20 date. We approached Riverside County official  
21 several years ago when we were in financial  
22 difficulty and asked that since they are claiming  
23 that we are absolutely critical to their complying  
24 with the AB-939 requirements, that would they  
25 consider paying us a fuel subsidy by putting a 25

1 cent per month charge on each trash bill in  
2 Riverside County. This is a prequel to what Julie  
3 suggested.

4 25 cents per month to help them avoid  
5 the fines that could be imposed by the state for  
6 non-compliance with AB-939 since we are so  
7 critical in their approach to that goal.

8 They took it to the Board of  
9 Supervisors, 25 cents a month on each trash bill.  
10 The supervisors said that was not politically  
11 acceptable, no. So, the answer to your question  
12 is, no.

13 PRESIDING MEMBER BOYD: Thank you. Mr.  
14 Chris Trott who will be followed by a Mr. Michael  
15 Theroux.

16 MR. TROTT: Is it still morning? Yes,  
17 barely good morning, Commissioner Boyd and  
18 Commissioners and members of the task force.  
19 Thank you for allowing me to speak on behalf of  
20 this plan.

21 My name is Chris Trott. I am the  
22 Director of Wood Fuel Purchasing for Covanta  
23 Energy, and I've been in biomass fuel procurement  
24 for 17 years now, and I am kind of wondering  
25 what's wrong with me, why don't I get into

1 something else. I guess maybe I love it. I  
2 really love biomass fuel procurement, and that is  
3 what I do.

4 Covanta Energy is a renewable energy  
5 company. We have four solid fuel bioenergy plants  
6 in California totalling 50 MWs, six landfill gas  
7 facilities, and we also operate the waste energy  
8 facility in Stanislaus County that is located in  
9 Crows Landing.

10 First of all, I want to say that we  
11 also, and I am not going to repeat, but I support  
12 Mr. Reese's comments that he just made, Ms.  
13 Malinowski-Ball, we support completely the  
14 comments she made, and Dr. Morris as well.

15 We are excited to see this Bioenergy  
16 Action Plan. In fact, the bioenergy producers in  
17 this state have been trying for years to get to  
18 California to develop a comprehensive biomass  
19 policy, and I have to tell you this is really  
20 exciting to me because it felt like we were just  
21 beating our head against the wall, like what Julie  
22 says, people say yeah yeah it seems like a great  
23 idea, it seems like a great idea, but when it  
24 comes to action, they usher you out the door. So,  
25 thank you very much.

1           Our single biggest concern is that this  
2   Bioenergy Action Plan that it facilitate true  
3   action, not just more discussion, not more  
4   studies, not more spending of research money. I  
5   had an uncle that told me that when all is said  
6   and done, more is said than done. That has been  
7   true in this whole area of bioenergy as long as  
8   I've been involved in it here in California.

9           My boss, he tells me that I'm all talk  
10   and no action. I don't want this plan to be all  
11   talk and no action. My grandmother said -- I am  
12   not sure exactly how this relates, but it is okay  
13   to keep an open mind, but just don't let your  
14   brains fall out, okay.

15           The bottom line is we are really tired  
16   of the talk and we want some action. The action  
17   plan, we have to say it says the right things, but  
18   we feel it is a little bit too broad in general to  
19   promote measurable action. The question that we  
20   have is if California really is the national  
21   leader in biomass power as it says on page one of  
22   the report, why is the industry in decline? Why  
23   is there even a need for a bioenergy action plan  
24   in California for a national leader?

25           I would like to suggest that there's two

1 reasons. One is, and this is listed in the  
2 report, that there is no financial recognition of  
3 the non-electric environmental benefits of  
4 bioenergy right now in California. That's part of  
5 the problem.

6 Number two, there is no financial  
7 recognition of the detrimental environmental  
8 impacts of traditional biomass disposal, namely  
9 the matchbook allowing fuels to build up in our  
10 forests and the landfill disposal.

11 We are going to provide some very  
12 specific comments in writing later, but I do want  
13 to address one item that is in the action plan  
14 specifically in the Tier 1 recommendations, 1-H  
15 and 3-A.

16 First of all, I want to say that we do  
17 not need better access to ag and forest biomass  
18 resources in this state, except maybe on federal  
19 lands, which if you can do something about federal  
20 lands, that would be awesome. We don't need more  
21 research into higher value uses for forestry  
22 waste. We don't need the Water Quality Control  
23 Board to insure that water sheds are protected.

24 Why? Because number one, we know how to  
25 access ag and forestry waste, we do it all the

1 time, we've been doing it for years. The markets  
2 for forest wastes are there. The problem is that  
3 just not many of those markets pay for the full  
4 cost of removal of the stuff from where it lays.

5 In every move made on private land in  
6 California is scrutinized by the Water Quality  
7 Control Board, so I don't think we need any of  
8 those things. What we really need is to resolve  
9 this barrier that we have. One barrier to the  
10 utilization of more biomass resources is that  
11 there is cheap alternative disposals.

12 For forestry and ag waste, there is the  
13 matchbook. This is important to all of bioenergy  
14 in the state. If there is cheaper alternative  
15 disposal methods, then that is where the stuff is  
16 going to go. It is going to go up in smoke.

17 For the urban wood waste, there is an  
18 exemption in this state for wood waste that is put  
19 in a landfill for alternative daily cover, and it  
20 is counted believe it or not as diversion from  
21 landfill. That just doesn't make any sense. That  
22 is the biggest barrier that I have right now to  
23 gather more biomass waste into our biomass power  
24 plants right there.

25 The solution, I'm going to suggest some

1 solutions that I would like to see. These are  
2 action solutions that could be in this report.  
3 Number one, require the Air Resources Board  
4 require forest land managers to offset their open  
5 burn emissions with biomass diversion to bioenergy  
6 use. Okay, that is number one.

7 Number two, there is agricultural open  
8 burn phase out in place in the San Joaquin Valley  
9 right now. I would suggest that we expand that  
10 open burn phase out throughout the entire rest of  
11 the state.

12 Number three would be to treat all kinds  
13 of woody waste that go into a landfill, no matter  
14 what the use, as disposal, not counting as  
15 diversion towards the 50 percent requirement in  
16 AB-939.

17 The second solution is that there is one  
18 of the barriers to collecting more of the biomass  
19 resources that is out there is the high cost of  
20 collection, processing, and transportation of  
21 these biomass wastes. Each step of collecting  
22 this biomass resource uses labor and equipment,  
23 and I am telling you lots of diesel. Every step  
24 costs money.

25 The solution, and this has been said

1 before, financial incentives to bioenergy  
2 facilities that utilize forestry, ag, and urban  
3 waste. The incentive levels should be based on  
4 environmental benefits to the state for that  
5 particular type of waste.

6 If forestry waste has a higher benefit,  
7 then there should be a higher incentive for using  
8 that material.

9 Funded by either some sort of solid  
10 waste collection fees, such as what has been  
11 suggested by Mr. Reese, 25 cents on everybody's  
12 trash bill or by the utility ratepayers in the  
13 form of a public goods charge. This type of thing  
14 has been shown to work already with the  
15 agricultural grant program that was in place here  
16 in California in early 2000. There was a \$10 a  
17 ton incentive to use agricultural waste that would  
18 normally be open burn. During that time frame  
19 that program was in place, there was a tremendous  
20 increase in the amount of agricultural waste use.

21 I appreciate your efforts put forth in  
22 developing this plan finally, and I am excited to  
23 see where this is going to go. I will be happy to  
24 answer any questions.

25 PRESIDING MEMBER BOYD: Thank you very



1 much. Question, Doug.

2 MR. WICKIZER: Yeah, Chris, I think it  
3 is not as much a question as an observation that  
4 when you mention that there is a use of the match  
5 to dispose of forest materials, I think we need to  
6 be careful when we are talking about that, our  
7 Vegetation Management Program, which is the  
8 prescribed fire for use of prescribed fire for  
9 California only burns maybe 10,000 to 12,000 acres  
10 per year. So, it is a very restricted opportunity  
11 and the barriers exist for that, one of which is  
12 air quality.

13 Historically, that was up in the peak of  
14 the program areas around 64,000 before the  
15 liability became the issue. Before that, when  
16 there was open range burning encouraged, we were  
17 up to 100,000 acres. We are somewhere around 10  
18 percent of the peak of the use of the match as you  
19 put it, and that material is a building area of  
20 fuels in California.

21 In the past ten years, we have gone from  
22 around the 250,000 acre wildfire average per year  
23 to a 500,000. That is a significant loss of  
24 available biomass. With improved harvesting  
25 equipment and opportunities and I think that could

1 have been increased significantly. Don't forget  
2 that 50 percent of the forest land base in  
3 California is federal, so solving that issue is a  
4 significant need to increase a reliable supply.

5 MR. TROTT: I guess I could answer that  
6 by saying forest managers need every tool that  
7 they have in their tool box. There is no doubt  
8 about that in our minds. What we are suggesting,  
9 and what I am suggesting I guess is these two  
10 solutions that I just presented kind of go hand in  
11 hand. One you require the forest land managers to  
12 offset their open burn emissions, but on the other  
13 hand, there is an incentive to bioenergy users for  
14 using the material that they would not burn and  
15 use as an offset.

16 For example, one of the barriers that I  
17 see that I think you are alluding to is the cost  
18 of the program, not only just the liability and  
19 the air regulations, but the cost of your program  
20 of burning.

21 if you could also remove some of that  
22 biomass that you need to remove or at least reduce  
23 the fuel levels before you burn so that you don't  
24 have as much emissions at no cost to you or very  
25 little cost to you, it would be a no brainer, it

1 would happen. It would go to a bioenergy  
2 facility, it would be subsidized by this financial  
3 incentive, and it would happen.

4 MR. WICKIZER: Chris, we are in full  
5 support of your observation and part of your  
6 solution. I am simply pointing out some of the  
7 points that you made don't really fit what's  
8 happening.

9 MR. TROTT: That is why I'd like an  
10 action plan, not a talk plan. Thank you.

11 PRESIDING MEMBER BOYD: Well, you are  
12 going to get an action plan finally. You have a  
13 governor that says he wants it.

14 All right, next Mr. Michael Theroux.  
15 Then Mr. Matt Peak, and then Mr. Todd Campbell.  
16 Then I think we will break for lunch.

17 MR. THEROUX: Mr. Chairman,  
18 Commissioners, folks, good afternoon by a couple  
19 of minutes. My partner in helping me finalize the  
20 comments today that I was pleased to be able to  
21 submit electronically in hard copy to the Dockets  
22 Office, Riley suggested, you know, you have come  
23 out very strongly in support of the draft action  
24 plan, but you've got nine pages of comments. That  
25 is sort of where most of us are.

1           We've been at this so long. We have  
2   chewed this thing so long that we all have ideas  
3   of what it has done and where it has gone and  
4   where we have been. The report takes a good hard  
5   look at what has been accomplished and proposed,  
6   particularly through the Energy Commission itself.

7           I don't want to pick at the report as  
8   much as look at what we need to do in the next few  
9   steps forward. It is instructive to ask ourselves  
10  here it is a decade later, and why haven't we made  
11  the progress that we thought we could make on  
12  bioenergy.

13          Here we have our plants coming back on  
14  line after PURPA back in '96, and now we are back  
15  in a place to where we are starting to lose large  
16  plants again. We need that support of those large  
17  plants certainly, but why haven't the methods that  
18  we have employed in the past to support and  
19  develop and increase the bioenergy and biofuels  
20  and bioproducts, programs and commercialism in  
21  California, why haven't they succeeded better than  
22  they have.

23          I think if anything that the report  
24  doesn't take that hard look at what we might have  
25  done wrong, where we can go from here. I'd like

1 to make the suggestion that there are work  
2 arounds. There are over-arching concerns in front  
3 of the public that have the public's attention.  
4 Certainly one of them is no more blood for oil,  
5 but on the ground in California, we have the  
6 difficulty of a veritable tsunami of waste washing  
7 over our urban areas that has got everybody at the  
8 various levels of scared.

9 In our agricultural areas in particular,  
10 the cry for something to do with all of that  
11 effluent coming out of our processing plants and  
12 our animal holding facilities seems to have the  
13 attention.

14 I would suggest that those two areas,  
15 both in the purview of waste management, solid,  
16 and liquid can provide us with the mechanisms then  
17 to drive forward the development of the  
18 technologies, the infrastructure, and the markets  
19 that we need to sustain the rest of biomass.

20 Indeed, if we can manage the large  
21 massive variability of the contaminates within the  
22 other areas of solid waste and liquid waste, that  
23 fragment that is biomass has significant element,  
24 that is biomass in general is less contaminated  
25 and therefore less costly to manage.

1           If we produce technologies that can  
2   manage the large scale fractions of municipal  
3   solid waste, for example, that portion that is  
4   biomass can use that technologic market and  
5   infrastructure development to move forward.

6           The draft plan does not necessarily  
7   point to the parallel efforts that we are so  
8   involved in. It has been mentioned a couple of  
9   times. A point was made of the hydrogen highway  
10  by one of the speakers. I think that from the  
11  step that we are at now, there needs to be a  
12  convergence of the Bioenergy Action Plan with the  
13  Governor's Hydrogen Highway Plan and in particular  
14  with the greenhouse gas emissions and the  
15  conversion technologies efforts that are ongoing.  
16  I think that would take the next step forward.

17          We speak of trying to find a way to site  
18  these facilities. Look to the concentrations of  
19  the feedstock. We have that data. It is GIS  
20  based. We know where the animal holding  
21  facilities are. We know the materials recovery  
22  facilities collect the stuff anyway.

23          Look to those locations for our siting  
24  potentials, not just for biofuels, but for multi-  
25  fuels.

1           There was a comment from the ethanol  
2   industry that indeed we want to be able use to the  
3   infrastructure of the petroleum industry in co-  
4   blending of ethanol and petroleum fuels.  Indeed  
5   we can work with that, but we also have an  
6   infrastructure in place for the biomass  
7   collection, and we need to look at that  
8   infrastructure as to locations and for siting  
9   biofuels, multi-fuels facilities including green  
10  hydrogen.

11           I have provided a number of  
12  recommendations.  Susan asked me in a conversation  
13  that we had early on, however, Michael, if you can  
14  just narrow down to one thing, what would it be  
15  that you would like the Commission to pursue right  
16  now.  That is a tough nut to crack.

17           What I suggested, however, was that we  
18  focus our attention on the development of regional  
19  external technology validation mechanisms that can  
20  in very transparent framework, in risk reduced  
21  framework, show what these things do, what these  
22  blends of fuels, how these blends of fuels can be  
23  made, what the conversion technologies mean and  
24  how they operate, and how we take those fuels into  
25  our advanced engines, and what we do with the

1 emissions as they come out the back side.

2           Nationally, this Northern California  
3 region is recognized as an agricultural center in  
4 particular where that sort of a biofuels external  
5 technology validation and certification program  
6 would be best suited. I think we should pursue  
7 that vehemently.

8           As a little side bar, I had efficacy  
9 insurance explained to me recently. Michael, take  
10 a look at it in terms of life insurance. Life  
11 insurance on a dancer is this much money, but  
12 insuring your legs cost more. So, we've got that  
13 kind of relationship. It is another layer. Do  
14 they work, is there a function there, and that is  
15 another step of interest. I like the analogy.

16           Gregg, I wouldn't ever suggest that we  
17 do anything but support the existing biomass  
18 industry, but I would suggest that the mechanisms  
19 for support to the infrastructure to move that  
20 biomass from the outside areas, as Chris was  
21 saying, cost every step of the way. I would  
22 propose then that the tools that we need at the  
23 modular scale can use a little bit of that stuff  
24 to turn to combined heat, power, and fuels at  
25 world locations, and cascade those fuels back down



1 to the regional plants and what the CEA is always  
2 looked for, that zero dollar fuel.

3 I'll leave my comments at that. As I  
4 said, they have been posted. Thank you for the  
5 opportunity. I am open to questions.

6 PRESIDING MEMBER BOYD: Thank you. Any  
7 questions?

8 (No response.)

9 PRESIDING MEMBER BOYD: Thank you very  
10 much. The next speaker is Mr. Matt Peak of  
11 CalSTEP to be followed by Mr. Todd Campbell of  
12 Clean Energy, and then hopefully by lunch.

13 I would note, we will have gone through  
14 about ten speakers by the time we break for lunch,  
15 and I have 30 more cards. We are going to have to  
16 step it up.

17 MR. PEAK: Mr. Chairman, members of the  
18 task force, I am very pleased to be able to have  
19 the opportunity to talk with you today. I am here  
20 representing CalSTEP, which is the abbreviation  
21 for the California Secure Transportation Energy  
22 Partnership.

23 Just to give those of you that aren't  
24 familiar with CalSTEP a little bit of a background  
25 as to who and what we are, it is a project that is

1 spearheaded by CalSTART, but it is comprised of  
2 diverse stakeholders from the private, public, and  
3 non-governmental sectors.

4           The focus of this group is California  
5 Transportation Energy Security, as its name  
6 implies. It is concerned with the fuel supply  
7 problem currently that exists in California. The  
8 goal is to increase the transportation efficiency  
9 and alternative fuel use in California while  
10 creating more wealth, economic opportunity,  
11 cleaner environment, and a better way of life for  
12 Californians.

13           Now all of this is going to manifest  
14 itself in an action plan, which the group will  
15 deliver later this year, either in the fall or in  
16 the early winter.

17           CalSTEP is not a partnership that  
18 focuses either on a single fuel or a single  
19 technology. Instead, we recognize that there is  
20 no silver bullet, and we look at the need to  
21 transition from one fuel to multiple fuels while  
22 incorporating greater vehicle technology and  
23 transit and smart growth policies.

24           Now as I mentioned before, this is a  
25 collaboration between public and private

1 stakeholders, and we are very diverse. We have  
2 members who are automakers, venture capitalists,  
3 environmentalists, transit organizations,  
4 alternative fuel providers, and we are still  
5 growing.

6 Now basically, we are working towards  
7 this action plan that we want to deliver this  
8 fall. Along the way, we are examining  
9 opportunities such as this one to come up, and we  
10 have recently had the opportunity to review the  
11 consultant's reports on bioenergy. In response to  
12 this, we have five recommendations.

13 First of all this is a very busy slide,  
14 so I have highlighted the main points. This is  
15 language taken straight out of the bioenergy  
16 consultant's report recommendations. Looking at  
17 an early recommendation listed in the report, the  
18 consultant, Navigant, recommends developing  
19 regulations that maximize the flexibility of using  
20 biofuels, working to preserve the existing market  
21 while addressing emission issues, and proposing  
22 minimum consumption levels to encourage in-state  
23 production.

24 Along this line, CalSTEP Partners have  
25 agreed that we should recommend a no backsliding

1 policy on blending. So, specifically, we  
2 recommend that by 2008, the state should  
3 explicitly incorporate a minimum pooled RFS into  
4 its existing fuel regulatory activity.

5 When we say pooled, we don't imply that  
6 this focuses on one specific biofuel, but rather  
7 just a minimum RFS of 6 percent, which is about  
8 the current level. Furthermore, CalSTEP wants to  
9 assert one of its primary goals, which will be  
10 represented in the master action plan that it is  
11 creating which is the CEC's goal of an overall  
12 alternative fuel usage of 20 percent by 2020.  
13 Specifically, we acknowledge and support the role  
14 of biofuels in meeting this goal.

15 Now very much related to previous to  
16 this first recommendation, CalSTEP recommends that  
17 the state lead the creation of biofuel  
18 specifications, and so, we are recommending a  
19 pooled RFS of 6 percent, but believe the multiple  
20 biofuels could meet this RFS. One significant  
21 barrier that exists is that there aren't  
22 specifications for biofuel blends such as B-10 or  
23 biodiesel. This is inhibiting the adoption and  
24 the support on the behalf of automakers for using  
25 biodiesel.

1           So, specifically, our recommendation is  
2   that the Governor direct the CARB and the CEC to  
3   set fuel specifications. We encourage the state  
4   to work with either the federal government, other  
5   states, or act on its owns. All three examples  
6   the state has done very well in the past. The  
7   state can create interim standards for biofuels  
8   such as B-10 until ASTM specs are established,  
9   specs that can be widely embraced by the  
10  automakers and by component suppliers.

11           Taking some more text from the Navigant  
12  report is that the consultant recommended the  
13  study the costs and the emissions impacts and fuel  
14  supply consequences of low level ethanol blends.  
15  CalSTEP very much supports this recommendation,  
16  but we think it should go a step further and not  
17  just examine as the previous slide states, you  
18  know, the costs and what will happen should we  
19  move to higher ethanol blends, but also let's  
20  assume for a second that we do move to higher  
21  ethanol blends such as E-10. CalSTEP recommends  
22  that CARB in coordination with the CEC commission  
23  a study to determine how the composition of  
24  reformulated gasoline can be changed, such as net  
25  emissions do not increase when using higher

1     biofuel blends.

2             Another piece of text that comes from  
3     the Navigant report is that it looks at E-85 usage  
4     in California, addressing the emissions  
5     performance fuel supply cost issues. CalSTEP not  
6     only supports this recommendation, but also  
7     suggests that the state aggressively increase the  
8     E-85 availability and use in the state by  
9     facilitating an environment or by providing the  
10    mechanisms for E-85 growth that parallels the  
11    state's Hydrogen Highway efforts. So, raising the  
12    profile of the E-85 to equal or surpass the  
13    attention that the Hydrogen Highway has received.

14            At this point, we aren't advocating a  
15    regulatory driven approach, but rather one that is  
16    focused on incentives, pricing, economics, and one  
17    that would enable E-85 to compete in the  
18    California marketplace.

19            Finally moving onto our fifth  
20    recommendation from the bioenergy consultant's  
21    report, the state agencies would be directed to  
22    purchase biofuels with specific targets for 2010  
23    and 2020.

24            We not only agree with this, but wanted  
25    to cite one particular piece of text that we found

1 particularly disturbing of California's over 5,200  
2 alternative fuel vehicles in the 2002 state fleet.  
3 Basically, a negligible amount were fueled with  
4 alternative fuels, which left approximately 99  
5 percent to be fueled with conventional gasoline.

6 Accordingly, CalSTEP recommends that  
7 California increase and insure the state fleet  
8 uses E-85. We recommend that the Secretary of  
9 State and Consumer Services Agency develop a plant  
10 to be used in the procurement process for vehicles  
11 and fuels, and specifically fuels, to most  
12 effectively reduce the state fleet's petroleum  
13 consumption.

14 We recommend that this report be  
15 delivered by the end of 2007 and that it insures  
16 the state's alternative fuel vehicles run on  
17 alternative fuels. We have specific  
18 recommendations for 2010 and 2012 for ethanol E-85  
19 usage in the vehicles, and we believe that this  
20 would be a very effective way not just for the  
21 state to demonstrate its commitment to these  
22 fuels, but also to help expand the market in this  
23 area.

24 Those are our comments. I appreciate  
25 the opportunity to speak with you today.

1                   PRESIDING MEMBER BOYD: Thank you, Mr.

2 Peak. Any questions?

3                   (No response.)

4                   PRESIDING MEMBER BOYD: Thank you very  
5 much. Last, Todd Campbell, last before lunch that  
6 is, representing Clean Energy. Todd wears many  
7 hats, I know Todd.

8                   MR. CAMPBELL: Today Director of Public  
9 Policy for Clean Energy. Thank you, Commissioner  
10 Boyd and members before us today for taking on an  
11 extremely important issue. I say that because  
12 like Commissioner Geesman said, there is a  
13 tremendous sense of urgency, particularly when you  
14 have countries that unfortunately we depend on  
15 significantly, the United States, with harm and  
16 pain. Just to give one example, or especially the  
17 Saudi attack or potential Saudi attack according  
18 to T. Boone Pickens who is a majority shareholder  
19 of our company felt that if that attack was  
20 successful, it would probably shoot us up into the  
21 \$100 per barrel range, which certainly have  
22 dramatic impacts on our economy.

23                   I constantly think we are turning into  
24 the redcoats, if you will. I am a history buff  
25 from my education from Georgetown, and I much



1 prefer to be a minuteman in this scenario. I  
2 think the world has drastically changed, and we  
3 have to be smarter with our energy policy and how  
4 we move forward as Californians and the country  
5 itself.

6 I think one of the most important things  
7 that we probably could do is that we must  
8 distinguish this effort from, although it has  
9 received a lot of fame, the Hydrogen Highway  
10 Project. I know there is a renewable roadway, and  
11 I would even suggest maybe the alternative fuel  
12 access way is another coined phrase, but I really  
13 think building on Bill Jones' comments, I think we  
14 need a welcome mat for all alternative fuels, not  
15 just biofuels, but all the other fuels as the  
16 Governor has suggested in his statements in  
17 developing an integrating comprehensive state  
18 policy on biomass.

19 The Governor is interested in including  
20 electricity, natural gas, and petroleum  
21 substitution potential. I think there is a very  
22 powerful reason for that is because i think  
23 sometimes the alternative market tends to stand  
24 apart from each other as opposed to coalescing and  
25 learning from history and standing together and

1     being a very potent and good force to actually  
2     make a significant penetration into this market.

3             One of the things that I think is really  
4     important when you look particularly in  
5     transportation policy and looking at some of the  
6     conflicting roles that I think -- I worked with  
7     Air Resource Board and the California Energy  
8     Commission, and certainly I remember spending some  
9     hours with Dean over there and trying to figure  
10    what would be a good blend with biofuels and what  
11    would not.

12            I think what is important for us to do  
13    is to create a system that actually instills real  
14    competition, that actually provides greater market  
15    penetration for all alternative fuels so that we  
16    can produce greater or more competitive pricing  
17    for customers for the economy, but also at the  
18    same time also starting to invest in all fuels,  
19    whether they are mature or immature at some point  
20    to insure that we have emissions benefits that are  
21    retained because quite frankly, before I came to  
22    Clean Energy and served as the Policy and Science  
23    Director for the Coalition of Clean Air, it is  
24    very clear that emission standards are very  
25    important.

1           Not only are they important, it is  
2   important that we advance towards zero, and there  
3   are a lot of issues with evaporative emissions,  
4   there are issues with global warming emissions.  
5   There are issues with oxides and nitrogen  
6   emissions, and we have to make sure that no matter  
7   what direction we are in, we need to make sure  
8   that not only are the emission standards are met,  
9   but we actually produce products that actually  
10  reduce emissions even further. I think that is  
11  why there was so much optimism behind the Hydrogen  
12  Highway because it presented the possibility of  
13  zero emission feature.

14           I think that is unfortunately, although  
15  I would like to see hydrogen busses today,  
16  yesterday -- not yesterday, but it seems like  
17  yesterday at my work, but about a month or so ago,  
18  the California Air Resources Board staff announced  
19  possible consideration of actually pushing back  
20  the zero emission bus requirement under the  
21  Transit Bus Rule, which means that we may not see  
22  that technology for quite some time with no  
23  emission benefit from a diesel pathway under that  
24  rule.

25           With regards to some of the

1 recommendations that were put forward in the  
2 report, we think the creation of a positive  
3 environment should be for all alternative fuels  
4 obviously, that can compete with petroleum  
5 products, that the Working Group should establish  
6 targets and create an impetus for investments for  
7 all alternative fuels.

8 Under the second recommendation, we  
9 certainly think that attempts to enhance bioenergy  
10 products without sacrificing other state mandates,  
11 such as environmental protection is a good one  
12 because there are issues obviously with certain  
13 applications. We certainly think that we should  
14 retain the blending.

15 We don't want to see the bio industry go  
16 away. Certainly we are supportive of it. In  
17 fact, Clean Energy doesn't have to just be in the  
18 business of supplying natural gas to  
19 transportation fleets. We also could look at  
20 supplying biofuels into transportation fleets.

21 We want to see biofuels succeed and that  
22 we spend the R & D or the research and development  
23 necessary to actually bring those fuels into our  
24 fleets.

25 While we seek to improve emissions

1 performance from bioenergy and prepare it for  
2 eventual distribution, we should also advance the  
3 greater agency coordination for alternative fuels  
4 to petroleum that can provide significantly better  
5 emissions today.

6 I would just like to point out that  
7 unfortunately, being in government myself and  
8 actually being very proud to represent a city --  
9 my third hat is the Vice Mayor for the City of  
10 Burbank, I am very proud to power over 700 homes  
11 through our Landfill No. 3.

12 I know that my time will come where  
13 someone else will replace me, and I would like to  
14 say or submit that unfortunately administrations  
15 are short-lived, and we really need to make sure  
16 whatever plan we put forward has some near term  
17 dates and deadlines because the next  
18 administration may not have or share the vision of  
19 this administration has in terms of fuel  
20 diversity.

21 Before the meeting, Commissioner Boyd  
22 and I were discussing this issue. He raised a  
23 very good point that maybe OPEC would decide to  
24 lower their prices and lure the American public  
25 into thinking that this may not be an issue. I

1 think we would be foolish to think that, but, you  
2 know, we do need to insure today that we set up  
3 targets and deadlines that are meaningful and that  
4 will last through administrations to come.

5 Although I think there is tremendous bi-  
6 partisan support for fuel diversity, I think that  
7 we may need to make sure that it is almost  
8 institutionalized as California I think is  
9 optimistic that stirs the drink for the world in  
10 terms of progressiveness.

11 The final or the third recommendation in  
12 the report, I'd like to say that we concur with  
13 the recommendation to enhance and accelerate  
14 California's existing research and development  
15 demonstration programs. Again, with an all  
16 alternative fuel focus. Then also to reemphasize  
17 the unfortunate conflicting sometimes goals  
18 between agencies.

19 Obviously the elimination of the Federal  
20 Oxygenate Requirement was from California's  
21 perspective was an air quality issue and the Air  
22 Resources Board. Obviously, the California Energy  
23 Commission has a different objective of trying to  
24 insure that we have fuel independence, and I think  
25 both are very vital goals, and I think the efforts

1 here if inclusive of all alternative fuels and  
2 also putting those research dollars to make all  
3 alternative fuels competitive, not only in the  
4 sense of being out there in the marketplace, but  
5 also in terms of reducing emissions impacts will  
6 be extremely important.

7 Finally, with regards to the high  
8 priority action recommendations for 2006, we feel  
9 that the Governor should consider an executive  
10 order that establishes statewide goals for  
11 alternative fuel production. We also support the  
12 extension and creation of all alternative fuel tax  
13 credits and provide equal treatment for  
14 alternative fuels relative to renewable energy  
15 resources and the federal incentive programs when  
16 it comes to vehicle applications and that we  
17 should insure the leveraging of federal research  
18 and development of efforts that include all  
19 alternative fuels.

20 To close, to establish a financial  
21 incentive to encourage investments and support  
22 innovation in all alternative fuels to petroleum  
23 and establish mechanisms for support for all  
24 alternative fuel producers for multiple benefits  
25 they provide.

1           I want to thank you very much for your  
2   time today. I wanted to also say that I think  
3   this issue, I am very glad we are taking up this  
4   issue because I think it is more important than we  
5   think. It is certainly more important than most  
6   Californians are aware of.

7           I think we tend to simply think of the  
8   price at the pump is how it impacts us, but if you  
9   look at the subsidies that are currently  
10  presented, even just between the bio-industry and  
11  the oil industry, it comes to something like \$1.3  
12  trillion dollars, not including the war efforts  
13  that we are currently engaged in in terms of  
14  subsidies for oil.

15           It would be nice to see some money come  
16  our way for the alternative fuel community so that  
17  we can insure that we have an energy independent  
18  future.

19           Thank you.

20           PRESIDING MEMBER BOYD: Thank you. Any  
21  questions of Todd?

22           (No response.)

23           PRESIDING MEMBER BOYD: Thank you.

24   Okay, I hate to do this to you. I know it is  
25  tough to get lunch around here, but I'd like to



1 get everybody back within an hour. I am not  
2 setting a time because everybody's clock says  
3 something slightly different, so one hour please  
4 per your watch.

5 (Thereupon, at 12:39 p.m., the workshop  
6 was adjourned, to reconvene at 1:39  
7 p.m., this same day.)

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## AFTERNOON SESSION

1:46 p.m.

MR. KRAMER: I just want to thank the Commissioners for having me. Thank you, Susan, by the way too. The reason I am here is that we have a project where we could replace 10 percent of the diesel fuel in the State of California.

We have an oil refinery, which was moth balled in 1984 that we would like to turn back on. It is about 28,000 barrels per day, but honestly the one thing holding us up is not funding, nor is it site, nor is it feedstock, it is regulation, which is why we are here in front of you today.

Much of it is centered around the fact that California Air Resources Board does not encourage the use of biodiesel because of the Nox increase, which needs to be re-examined because depending on the feedstock, the Nox can actually be a decrease, especially if using animal fats or other feedstock sources.

One of the other regulations that is very archaic for us is the requirement that everyone that use biodiesel sign a waiver discussing the risks associated with it. You can

1     imagine if you are having a retail station, this  
2     would definitely put a crimp in your operations.

3             I have two colleagues over there, Mr.  
4     Chris Mueller and Zack Wright who came with me  
5     today. We have the largest independent retailer  
6     of gasoline in the state interested in  
7     distributing biodiesel as well at some of their  
8     stations, but, again, we have run into many  
9     bottlenecks in the system which literally prevent  
10    us from doing this.

11            We are coming here today to say we have  
12    the solution. We have been looking at the  
13    feedstock problem for two years. We have plenty  
14    of feedstock, we have an area which is a brown  
15    field and old oil refinery which we are ready to  
16    turn back on and get operational again producing  
17    biodiesel, but the regulations and the permitting  
18    process is onerous to say the least.

19            We also have to realize that our  
20    competition is the largest monopoly in the world,  
21    and they have some things that we would never  
22    have, which simply on the federal level, they can  
23    write up 70 percent of their development and  
24    construction costs in the first year and 30  
25    percent over the next five.

1           They also have a \$500 million loan  
2   program and \$2.4 billion in tax breaks. So, we  
3   are definitely up against a challenge. I brought  
4   along today a jar of biodiesel because we have all  
5   been talking about renewable fuels, but let's  
6   actually see what it is.

7           I'll pass this around the room, you guys  
8   can take a look, this is what we are talking  
9   about, you know, and this is one of the concerns I  
10   have with the proposed Bioenergy Action Plan is  
11   that it focuses specifically on ethanol and not  
12   really on biodiesel.

13           Biodiesel as a petroleum replacement  
14   source is complete. We can make jet fuel, we can  
15   make desolates, transportation fuels, and we can  
16   also make bunker oil for ships. You have a  
17   complete petroleum replacement. The net energy  
18   yield on that jar of biodiesel is about 30 to 1.  
19   So, there is no question that the energy yield and  
20   the technology are available.

21           That is simply what I am here to say is  
22   we have a project we would like to go forward  
23   with. We will send you some written comments on  
24   the specifics we need, and we can replace right  
25   now 10 percent of the diesel fuel supply with a

1 non-petroleum substitute.

2 Thank you very much.

3 PRESIDING MEMBER BOYD: Thank you. We  
4 look forward to seeing your written comments, but  
5 I'll reread the consultant report that I didn't  
6 think it was biased away from biodiesel. My  
7 agency as an agency is extremely interested in  
8 biodiesel, so I don't think you are being left out  
9 of the equation, but I do want to read it the way  
10 lay people might read it and make sure that nobody  
11 is biased one way or another.

12 All right, next is David Baskett,  
13 American Ethanol.

14 MR. BASKETT: I'll be very short. Be  
15 thankful all of the people that are going to  
16 follow me.

17 First of all, I appreciate the comments  
18 or the chance to make comments and the great work  
19 that we have seen happen this morning in the  
20 action plan. I just want to mention two things.  
21 One are the major obstacles as we see it and  
22 developing a 50 million gallon ethanol and  
23 biodiesel plant in Santa Maria, and that is  
24 permits, permits, and permits.

25 A lot of good action is taking place

1 right now in the county with the county  
2 supervisors who are trying to streamline the  
3 process there. So, we are very encouraged about  
4 that, but we look forward to being able to service  
5 both the Bay Area and the L A Basin with ethanol  
6 and biodiesel products in the near future.

7 The other thing I'd like to comment on  
8 was only lightly touched on. That is national  
9 security. Before the Iraqi war, there was a  
10 report that about a million dollars a day from  
11 California was finding its way back to Saddam  
12 Hussein through the Oil for Energy Program -- Oil  
13 for Food Program.

14 I think those dollars are far better  
15 kept here in California, circulated here, taxed  
16 multiple times here and used for other purposes.

17 Again, thank you for the opportunity to  
18 make a few quick comments.

19 PRESIDING MEMBER BOYD: Thank you and  
20 thank you for the brevity.

21 There will be no dinner break. I heard  
22 that comment earlier. We are going until somebody  
23 drops, but hopefully everybody will mercifully  
24 move this along.

25 Tom Fulks, and after Tom, I think I am

1 going to turn to the first of two telephone people  
2 that I think want to speak, Mr. Greg Shipley.

3 MR. FULKS: I actually have a power  
4 point presentation that I just want to mess with.  
5 Now that you've turned off the lights and I can't  
6 read my presentation, I'll just have to go by  
7 memory.

8 My name is Tom Fulks, and I am here to  
9 represent the Robert Bosch Corporation. Bosch is  
10 the largest supplier of automotive parts  
11 technology in the world. It is also a supplier or  
12 one of the major world suppliers of fuel injection  
13 systems for diesel vehicle.

14 Bosch has an interest in this topic,  
15 especially in California, and I came to deliver  
16 the message from the folks in Farmington Hills,  
17 Michigan and in Stoughton that Bosch supports  
18 what you are doing with the Bioenergy Action Plan.

19 We've got some very specific comments  
20 that go to how to go about the process of  
21 developing a quality spec so that we can have a  
22 quicker introduction of biodiesel fuel in the  
23 state and overcome some of the barriers that the  
24 ASTM folks have been encountering in developing a  
25 quality spec.

1           I've got all of these comments have been  
2 submitted to the docket, so rather than spending a  
3 lot of time just reading this to you, I'd like to  
4 skip over a couple of things and especially the  
5 generality parts about how great we think you are  
6 and all of that stuff. You can just read that  
7 later.

8           What I would like to do is just read a  
9 couple of important sections to you before I  
10 begin. Bosch supports the release of specified  
11 and standardized biodiesel fuels in California and  
12 the rest of the U.S.

13           The major caveat is that quality  
14 standards for biodiesel and the bio feedstocks  
15 remain to be adequately established. Feedstock  
16 producers and suppliers, distillate fuel refiners,  
17 fuel retailers, as well as the automotive  
18 industry, government, and other stakeholders need  
19 to work cooperatively to develop appropriate  
20 standards to insure the long term success of  
21 biodiesel.

22           As one of the world's main suppliers of  
23 diesel fuel injection systems, Bosch has extensive  
24 expertise in the area of fuel quality, and Bosch  
25 would like to offer some of that expertise to the



1 State of California which ever appropriate state  
2 agency goes about the business of developing it by  
3 a California biodiesel fuel, and hopefully the  
4 step that comes before developing the fuel  
5 standard will be the quality, the California  
6 biodiesel quality spec.

7 We are here today because Bosch believes  
8 the Energy Commission has a significant  
9 opportunity to put the state and the nation on a  
10 path leading toward the development of a quality  
11 biodiesel fuel specification that can lead to a  
12 meaningful market share for biodiesel within the  
13 next few years.

14 Again, overall Bosch supports the  
15 direction that the CEC is headed with this report.  
16 The stipulation here is that any biodiesel fuel  
17 quality standard that emerges from this effort  
18 must be compatible with the emissions technology  
19 that is being developed now to meet strict 2007  
20 Tier 2 Bin 5 or California Lev 2 emission  
21 standards and the medium heavy duty diesel  
22 emissions standard being established by the EPA or  
23 have been established by the EPA for 2007 and  
24 2010.

25 What Bosch would like is for a benchmark

1 quality spec for biodiesel that has been developed  
2 by California. If that means cooperating with  
3 ASTM, fine. If that means using an ASTM spec for  
4 biodiesel, fine. The role we think California can  
5 play is pushing this process along so that we  
6 don't have to wait for the ASTM vote that  
7 sometimes takes years and years and years to do.  
8 We've got a recommended path of a process that we  
9 think would be appropriate to follow.

10 As this chart demonstrates, this is how  
11 Bosch sees this process sequencing out.  
12 Obviously, the first problem to overcome is  
13 meeting the emissions challenges. Rather than  
14 just going through every line, I will just skip  
15 down to the middle part. The bio-blends, Bosch  
16 thinks the smart approach to take is to focus on a  
17 bio-diesel spec that everybody can agree on. That  
18 spec for all intent and purposes ought to start  
19 somewhere with a single blend stock that most  
20 people can participate in and using that blend  
21 stock specification for quality, then every other  
22 blend stock that comes in for the spec process  
23 simply has to meet the benchmark standard.

24 If you begin the process of starting  
25 with mild blends B2, B5, and working your way in

1 to B10, B20, we think the fastest approach if the  
2 approach we are going to be talking about in just  
3 a second.

4 The biggest concerns that Bosch has  
5 right now with polymers, acids, peroxides, filter  
6 clogging, seizure, nozzle cloaking, corrosion,  
7 soap formation, damaged seals, these are basically  
8 warranty issues for Bosch, which is again, the  
9 number one fuel injection supplier for most diesel  
10 systems. These are real concerns right now at the  
11 National Biodiesel Conference that was just held  
12 in San Diego. Deer ran a test on B100, Euro spec  
13 B100 on a Deer engine, a John Deer engine I should  
14 say, and they had a fuel injection failure in  
15 three out of three tests.

16 This isn't good for anybody. This is  
17 definitely not good for the biodiesel industry, it  
18 is not goof for the diesel vehicle industry. No  
19 one wants a replication of the failed diesel  
20 effort of the 1970's and 80's when it just wasn't  
21 done right. So, we are suggesting if you are  
22 going to do this, follow a process that just makes  
23 sense in terms of a development perspective.

24 The areas that are highlighted in red  
25 and the yellow. I'm not going to read this entire

1 table, but this is the ASTM quality development  
2 process. On the left hand column, are all the  
3 different issues that are in discussion with the  
4 ASTM, density, viscosity, water content, yah ta da  
5 ta da. It is in the report, and you can see that  
6 on line.

7 The areas that are in the red, and  
8 especially in yellow, are those areas where there  
9 is simply been no agreement, and that is why there  
10 isn't a national standard right now for biodiesel  
11 because of these very technical issues that are  
12 very real in terms of fuel injection systems and  
13 emission systems.

14 Now I will get right down to the basic  
15 recommendations. Again, we have a lot more  
16 background that goes into this, and I really  
17 encourage staff to read the document. It is about  
18 a nine page document, but we are just going to go  
19 ahead and jump in. We would like the CEC to  
20 basically break down this discussion of a spec  
21 into stages.

22 First consider how wide spread the  
23 market is, where you want it to be. Take note of  
24 old work you have already done, the IEPR says very  
25 clearly the bio feedstock and production capacity

1 in the U.S. may not be enough to even meet a B5  
2 blend if it were a nationwide requirement. Again,  
3 figure out exactly what you want to do.

4 Then we recommending go to CARB and work  
5 with other appropriate state agencies, biofuel  
6 producers and the automotive industry, and I'm  
7 looking at the body of work, the report that came  
8 out from the consultants, and there is very little  
9 input from the automotive end of things. So, we  
10 would really encourage you to ask for help because  
11 help is available.

12 Automotive is a stakeholder in this  
13 process. We are the users. So, it is one thing  
14 to talk to people who make the stuff. You really  
15 need to talk to the people who use the stuff.

16 Begin the process with a -- now this is  
17 where it may appear to be a little controversial,  
18 but I am just going to say it and try to follow  
19 the paperwork as submitted. We are recommending  
20 starting with a mainstream soy-based feedstock as  
21 a way to fast track the biodiesel quality spec  
22 benchmark for all other feedstocks. We are not  
23 saying zero in on soy and make soy the standard.  
24 What we are saying is use the most common  
25 feedstock to establish a benchmark quality spec

1 for a place to begin, a place to start the  
2 process.

3 We believe that by requiring all  
4 feedstocks to meet the same benchmark, you  
5 actually may be able to accelerate the quality  
6 spec development process. Again, this is pretty  
7 well spelled out in the written comments as  
8 submitted.

9 Right now, we understand that CARB is  
10 working on an agreement with the UC Riverside  
11 (Indiscernible) Program to test the emission  
12 characteristics of a potential California  
13 biodiesel, and we think that is a fantastic idea.  
14 We would like for there to be a quality spec  
15 developed first because if you are measuring the  
16 emission characteristics of California biodiesel,  
17 those characteristics are going to change if the  
18 spec is changed at some point. So, again, it is  
19 the process we are encouraging you to go through,  
20 develop the spec, the minimum spec first, and then  
21 do the emissions characteristics.

22 While you were at it, we were hoping  
23 that the Air Resources Board would study the  
24 impact of all biodiesel blends on engine after  
25 treatment systems. These are the DPF filters and

1 the Urea systems and everything else because there  
2 really is very little data on biodiesel impacts on  
3 these after treatment systems. These would  
4 include the retrofit devices that are going on in  
5 some of the older diesel trucks as well.

6 Again, have soy-based biodiesel  
7 emissions testing as the first of many feedstocks  
8 to be tested in order to establish a baseline  
9 understanding of emissions against which all other  
10 feedstocks would be measured.

11 Our last recommendation, again, is to  
12 include more automotive industry representatives  
13 in the CEC's list of stakeholders to insure a  
14 complete circle of expert involvement rather than  
15 sort of a back and forth between people who tend  
16 to talk to each other anyway a lot. This would  
17 include academic government fuel producer and fuel  
18 users.

19 That is the end of my comments. Again,  
20 though, the written portion is much more detailed  
21 and has got a very specific path laid out that we  
22 would recommend. I'll take any questions if you  
23 have them.

24 PRESIDING MEMBER BOYD: Thank you. Any  
25 questions? There is a question in the audience.

1 This is a workshop, get up and shout because no --

2 UNIDENTIFIED SPEAKER: (Inaudible.)

3 MR. FULKS: Bosch is very familiar with  
4 the recommendations in the staff report about  
5 trying to develop a feedstock that is unique to  
6 California. Bosch is not pushing a particular  
7 feedstock in any way. Bosch is saying the  
8 quickest way to a quality spec is to use the most  
9 dominant feedstock now that is available now  
10 because that would involve the most people in the  
11 industry who could be involved in the process.

12 So, the whole idea isn't to push  
13 particular feedstock, it is to push a quality spec  
14 quickly so we can get the biodiesel industry  
15 moving.

16 PRESIDING MEMBER BOYD: You have a  
17 question in the back of the room there.

18 UNIDENTIFIED SPEAKER: One of the  
19 controversies between the U.S. and the European  
20 standards has to do with Iodine in the diesel.  
21 Are you aware of that, and if you are, can you  
22 explain what the true issue is.

23 PRESIDING MEMBER BOYD: Iodine in the  
24 diesel.

25 MR. FULKS: I am aware of it, but I am



1 going to tell you I'm not going to answer  
2 technical questions like that because I believe  
3 that would be reserved to the Bosch engineers, the  
4 fuel engineers. There are some OEM's in the  
5 audience as well who have fuel engineers, and,  
6 again, I just -- Bosch isn't interested in getting  
7 into the argument over the feedstock. Bosch wants  
8 a quality spec.

9 PRESIDING MEMBER BOYD: There is another  
10 volunteer.

11 UNIDENTIFIED SPEAKER: (Inaudible.)

12 PRESIDING MEMBER BOYD: You are whom  
13 from where just for the record.

14 UNIDENTIFIED SPEAKER: (Inaudible.)

15 PRESIDING MEMBER BOYD: Thank you.

16 MR. FULKS: Partner at the next energy  
17 project at Michigan State. Thank you very much.

18 PRESIDING MEMBER BOYD: All right, Tom,  
19 you are the only one who riled up the audience.

20 (Laughter.)

21 PRESIDING MEMBER BOYD: Greg Shipley is  
22 on the phone, and he sent an e-mail saying he  
23 would really like to say something, so I am going  
24 to recognize him. Greg, are you out there?

25 MR. SHIPLEY: Yes, I am. Thank you,

1 Commissioner Boyd, and I want to thank you and  
2 Commissioner Geesman for your work in alternative  
3 fuels are very much appreciated by the industry.

4           Once again, my name is Greg Shipley. I  
5 represent the Waste Energy and my partner in  
6 California is Jenna Hall. We have commercially  
7 viable technologies and we have about seven  
8 projects in California ready to go.

9           The problem is that the time required to  
10 get through the permitting process and then the  
11 inability of California to actually justify  
12 regulatory code to allow establishment of  
13 conversion technologies is owners.

14           My direct point would be that we agree  
15 with everything in the draft report that we see,  
16 but we think something should be added in the  
17 legislative initiative needed to support the plan  
18 and that specific legislation needs to take place  
19 in order to actually address the issues of  
20 definitions of conversion technologies. For  
21 instance, the gasification would be classified as  
22 a disposal in terms of the California Integration  
23 Waste Management Board.

24           There were two pieces of legislation  
25 that were on a two-year track. One was AB-727,

1     which allowed for six demonstration plants to be  
2     built for conversion technologies within the  
3     state. That was under the Assembly's Natural  
4     Resources Committee, and that legislation was  
5     tabled.

6             The most important legislation, which  
7     was AB-1090, that would have corrected the  
8     definition of conversion technologies, it would  
9     have established the conversion technologies in  
10    the hierarchy for recycling, which they are not  
11    now considered, even though they would be  
12    diverting waste from landfills or being burned in  
13    agricultural application.

14            It would also establish a diversion  
15    credit and that is particularly important in that  
16    the cities and the municipalities and  
17    jurisdictions that control the waste stream need  
18    to be rewarded for their efforts to divert  
19    materials away from the landfill into useful and  
20    beneficial product.

21            This is an important point in  
22    California, otherwise I don't think that you will  
23    see any conversion technology plants being built  
24    in California, and all these great recommendations  
25    in the action plan here will actually be

1 supporting facilities that are outside of  
2 California. For instance, I know of competitors  
3 of mine that already have established projects are  
4 going in Nevada, Oregon. We actually have a  
5 couple in Arizona. That is the direction in which  
6 the industry is taking at this point.

7 We support everything in the plan, but  
8 we really think in order to be an action plan,  
9 that specific legislation needs to be pushed  
10 through the legislature right now. When you talk  
11 in terms of like Mr. Campbell and Mr. Jones spoke  
12 about, you have what amounts to be a perfect  
13 storm. You have increased demand for  
14 transportation fuels by India and China. You have  
15 trouble spots or lynch pins in transportation fuel  
16 supplies in oil with Iraq, Iran, Nigeria,  
17 Venezuela, those are all pressure points.

18 Then we had a natural disaster this past  
19 year that cut supplies in the Gulf Region of  
20 Mexico. Any one of these could set off higher  
21 demands with no supply for California. Really  
22 that is an issue that needs to be addressed by  
23 California, and I applaud the Governor for trying  
24 to coordinate all the agencies in the State of  
25 California, I think it is a wonderful thing. We

1 really need to include the Legislature in on that.

2 Thank you very much.

3 PRESIDING MEMBER BOYD: Thank you, Greg.

4 Yes, Fernando. The Waste Board speaks.

5 MR. BERTON: We are not silent. Greg,  
6 this is Fernando from the Waste Board. I think  
7 you know, but I'm saying this for the benefit of  
8 the audience, but Assembly Bill 2118 has been  
9 introduced that would address some of these  
10 definitional issues. It hasn't been set for  
11 committee yet, they are talking some time later  
12 this month in March. The primary purpose really  
13 is to address some of those definitional issues.

14 We are heading down that path. How that  
15 bill and the language ultimately ends up is  
16 frankly beyond my control or the Waste Board's  
17 control. We are always at the mercy of the  
18 Legislature on that, but so we are heading down  
19 that path.

20 MR. SHIPLEY: I wanted to thank you  
21 particularly, Fernando, because you are one of the  
22 people that has been there for years at the  
23 grassroots trying to get things coordinated for  
24 conversion technology, and you are right, there is  
25 a son of AB 1090, the AB 2118, but it only

1 addresses one out of three important issues.  
2 Really I would like to see that language in 2118  
3 go back to the original language of AB 1090  
4 because it solves all of the problems and it is  
5 very simple language.

6 The Integrated Waste Management Board  
7 has done a terrific job, especially in the March  
8 2005 report to the Legislature that demonstrates  
9 really the need to have Legislative action take  
10 place, and we applaud your efforts there.

11 PRESIDING COMMISSIONER BOYD: Thank you,  
12 Greg, and I think the group will address that.  
13 There is a gentleman in the audience here who --

14 UNIDENTIFIED SPEAKER: I just have a  
15 quick question. What was the name of Greg's  
16 company again. I am sorry I didn't catch that.

17 PRESIDING COMMISSIONER BOYD: Waste to  
18 Energy. Next will be Mr. Cal Hodge, who is  
19 representing SD Oil and Paul Wuebben in the South  
20 Coast District, and then Fred Maloney of Daimler  
21 Chrysler.

22 UNIDENTIFIED SPEAKER: Excuse me,  
23 Commissioner, when will you be taking telephone  
24 comments?

25 PRESIDING MEMBER BOYD: I have Allen

1 DeSault who has let me know that he would like to  
2 speak and now I have you. If you will give me a  
3 name, I'll be able to call it out. Can you give  
4 me your name, sir?

5 MR. BLANKENBURG: Joseph Blankenburg.

6 PRESIDING MEMBER BOYD: I am trying to  
7 mix this up between people here and people on the  
8 phone rather than leave the people on the phone to  
9 the last, which could be quite late tonight.

10 MR. BLANKENBURG: Way past my bedtime.  
11 I know you are doing a marvelous job, you really  
12 are.

13 PRESIDING MEMBER BOYD: Thank you. Mr.  
14 Hodge.

15 MR. HODGE: Thank you, Commissioner,  
16 workshop participants, people who have spent a lot  
17 of long hours putting this report together. I'm  
18 coming to this thing a little bit late in the  
19 program, but I have some technology I'd like to  
20 tell you about that I think you'll find very  
21 interesting.

22 Susie told me I had five minutes. I am  
23 going to give you my conclusions first.

24 PRESIDING MEMBER BOYD: Good for her.

25 MR. HODGE: The product we are talking

1 about, we are calling it NExBTL. It is the Next  
2 Generation Bio-To-Liquids diesel fuel. It is  
3 really a second generation renewable diesel. It  
4 combines the benefits of GTL diesel with  
5 biodiesel. It has the premium fuel properties,  
6 just like GTL. It reduces exhaust emissions like  
7 GTL. The important thing is it fits in the  
8 existing infrastructure. You can put it in at the  
9 refinery and it goes all the way to the cleaner  
10 burning tail pipe without any problems.

11 It has Co2 savings like biodiesel. It  
12 is renewable, it reduces our oil dependence. It  
13 also provides a consistent quality. We don't have  
14 to worry about which feedstock goes in because the  
15 process it adjusts to make a product of consistent  
16 quality and can start with either animal fat or  
17 vegetable oil from a variety of vegetables, which  
18 I think is important as we try to site one of  
19 these things.

20 It provides for a cleaner more energy  
21 efficient future, and I believe that California  
22 needs to keep to the door open to second  
23 generation renewable diesels like NExBTL and I  
24 also know that Neste is ready to help.

25 This is the nice stuff we can kind of



1 skip over this. You guys did a really great job,  
2 you really did. You captured the pros and cons of  
3 a lot of various bioenergy sources, and I  
4 appreciate that. I even found a paragraph in here  
5 on recent technology which basically is very close  
6 to what I am talking about. So, I think you guys  
7 did a great job.

8 I am going to talk about some of the  
9 strengths and weaknesses of Neste's technology,  
10 why California needs it and what we need to do to  
11 make it happen in California.

12 I am going to start with what we need to  
13 do to make it happen. Neste is ready and able.  
14 Neste would enjoy doing a demonstration project,  
15 but they have already done the pilot plant work,  
16 and they have construction under way on a 60  
17 million gallon per year plant in Finland. It is  
18 going to start up in 2007.

19 They didn't worry about insurance  
20 because they created the process, they are funding  
21 it, they are doing it. I think that instead of  
22 having the Energy Commission, Waste Management,  
23 Ag, and Air Resources study these things of where  
24 we might be able to pull feedstocks together,  
25 where we might be able to site a plant, I think we

1     should actually identify potential plant sites,  
2     feedstock sources, and then actually sit down and  
3     determine the economical viability of this process  
4     in California.

5             I am going to have a copy of this  
6     summary and more details will be added to your  
7     docket.

8             Now why do I think this is good. I just  
9     underlined these things that I didn't mention  
10    earlier. There is no storage stability problems  
11    with this material. It is a hydrocarbon for  
12    crying out loud. Excellent performance in cold  
13    climates. This product can be tailored to have  
14    a -30 degree cloud point. That means that you can  
15    use it Finland. That may be why they created it.

16            It has a very high cetane number 84 to  
17    99 is what we have measured in the lab. That  
18    means that refiners can upgrade other stocks into  
19    diesel fuel when they use this. It is free of  
20    aromatics, sulphur, and oxygen. Dean, it fits  
21    your carb diesel beautifully.

22            The important thing, though, is that  
23    when we tested this product by mixing it into an R  
24    ready ultra-low sulphur diesel fuel, seven parts  
25    per million sulphur, we found reductions in Nox,

1 PM, hydrocarbon, and CO exhaust emissions.

2 The thing also has less Co2 on a life  
3 cycle and fossil diesel fuel and also based upon  
4 the sources we looked at, some of the traditional  
5 biodiesel fuel. It captures the benefits of both  
6 biodiesel and GTL diesel.

7 Here its properties. It looks very much  
8 like GTL. One of the things that I am concerned  
9 about and why I am here is some states have been  
10 writing specifications that would exclude this  
11 product from the market. They are specifying  
12 particular molecules have to be in the product in  
13 order to be considered a renewable or a biodiesel.

14 We want to avoid that. I believe that  
15 the ASTM D975 diesel fuel specifications or the  
16 carb diesel fuel specifications are the only thing  
17 that should limit how much of this material should  
18 be in diesel fuel. Most of the properties  
19 improve. The only drawback we have is just like  
20 ultra-low sulphur diesel fuel or GTL diesel. We  
21 do require a lubricity additive.

22 Now because it is paraffins, the people  
23 that have biodiesel technology already in place,  
24 because it is a paraffin, this doesn't limit you  
25 from being B2 or B5. This looks just like a

1 hydrocarbon. It looks just like diesel fuel. So,  
2 therefore, it increases the overall potential  
3 renewability of diesel.

4 We just have to be careful when we write  
5 those standards. If somebody says I want to  
6 reduce petroleum and they substitute hydrocarbon,  
7 this produce could be in trouble as they write  
8 specs.

9 Here is a sample of what it does on  
10 emissions. Nox down 18 percent. PM down 28  
11 percent. This is from ultra-low sulphur diesel.  
12 Here is what it did for hydrocarbon and CO  
13 emissions. Again, we are getting a 22 percent or  
14 so reduction in hydrocarbon and about a 6 or 7  
15 percent reduction in CO. Fantastic fuel.

16 A lot of people are concerned about  
17 cancer-causing impact of diesel fuel. This  
18 material was mixed with the Swedish diesel and K1  
19 diesel, it is clean diesel just like the carb  
20 diesel.

21 We found that by the time we had 15  
22 percent of this in the blend, the mutagenicity was  
23 about the same as if you had an oxidation catalyst  
24 following the engine. This offers promise for  
25 existing vehicles, so you don't have to retrofit

1 as much.

2 Here is what it does on the Co2  
3 equivalent greenhouse emissions, .5 to 1.5  
4 depending upon the feedstock. It compares  
5 favorably with existing biodiesel technology, and,  
6 of course, it beats the daylights out of fossil  
7 fuel diesel.

8 Here is the slight very simplified  
9 production flow diagram. It collect vegetable oil  
10 or animal fats, pre-treatment, there are some  
11 solids that have to come out, and porvoo, those  
12 are going to power generation. You are making  
13 power out of solids that I heard earlier today.

14 The process itself requires a little bit  
15 of hydrogen, about 3 percent. It converts the  
16 fatty acids to diesel fuel, hydro carbons. The  
17 oxygen atoms that came in with the fatty acids  
18 report out as water. It also makes biofuel gas,  
19 which can either go to hydrogen or power  
20 generation and has a small quantity of biogasoline  
21 that is made. Then the product itself can either  
22 be sold as a neat component or blended with diesel  
23 fuel.

24 I'm going to let your eyes rest on that  
25 slide. Basically, this process reaffirms Neste's

1 strong environmental commitment, and they would  
2 like to work with you to make it a reality here in  
3 California. Now I will take questions.

4 PRESIDING MEMBER BOYD: Thank you. Any  
5 questions?

6 (No response.)

7 PRESIDING MEMBER BOYD: You have stunned  
8 everybody, okay.

9 MR. HODGE: Well, we've got one back  
10 here. We've solved a lot of problems.

11 PRESIDING MEMBER BOYD: Steve Schaffer.

12 UNIDENTIFIED SPEAKER: Are you providing  
13 this as technology or (inaudible)?

14 MR. HODGE: Neste is very flexible on  
15 that. We can do technology, we can do a turnkey  
16 system. We can do a partnership. Somebody could  
17 bring feedstock, we could bring technology,  
18 somebody could bring operating, we can work that  
19 out. That is wide open right now, depending on  
20 what fits best for the total project.

21 PRESIDING MEMBER BOYD: Steve, you had a  
22 question?

23 MR. SCHAFFER: Very quickly. Have you  
24 had any conversations with the Division of  
25 Measurement Standards at the Department of Food

1 and Agriculture in terms of ASTM standards and --

2 MR. HODGE: Actually, we are very late  
3 to this process, so we have not been talking with  
4 the Department of Agriculture. However, I've been  
5 fighting petroleum specifications since 1967. The  
6 properties of this material fits beautiful in ASTM  
7 D975. There is nothing in there that would  
8 prevent it. There is nothing in there that would  
9 prevent it from being in carb diesel.

10 You notice on its energy content, it was  
11 a little bit less energy content than the typical  
12 diesel, that is because it is a little bit  
13 lighter. So, some people may want to limit how  
14 much they put in because the diesel may get a  
15 little too light, but when you put that lubricity  
16 additive in, it is great.

17 As a matter of fact, you could even use  
18 biodiesel as the lubricity additive if you wanted  
19 to.

20 MR. SCHAFFER: I would encourage you to  
21 contact our Division of Measurement Standards, and  
22 I can help put you in touch.

23 MR. HODGE: Would you please? Thank  
24 you, Steve. Other questions?

25 PRESIDING MEMBER BOYD: Thank you very

1 much.

2 MR. HODGE: Thank you.

3 PRESIDING MEMBER BOYD: Next is Paul  
4 Wuebben of the South Coast Air Quality Management  
5 District.

6 MR. WUEBBEN: I appreciate that  
7 lengthier intro. For the record, I am Paul  
8 Wuebben, the South Coast AQMD, and I don't think I  
9 better forego the compliments because they are  
10 certainly deserved and not to be overlooked. This  
11 is an important topic, and your staff and  
12 consultants have generally done a good job.

13 Obviously we are here to focus on some  
14 of the crucial aspects on the transportation side,  
15 (Indiscernible) is here as well and will be  
16 engaged in an on-going conversations in the  
17 broader context of stationery issues as well. I  
18 did want to emphasize at this juncture that the  
19 preservation of the emission criteria emissions  
20 benefits is very much a central test of a sound  
21 biofuels policy in our judgement. It is important  
22 from our standpoint to recognize that we start  
23 with a major deficit with respect to Phase 3  
24 gasoline as it applies to permeations, so that is  
25 really a challenge that we are trying to deal



1 with, and I know ARB is struggling with that as  
2 well.

3 We've learned that while there was an  
4 attempt to make all appropriate adjustments in  
5 rolling Phase 3 for the gasoline out to comply  
6 with the no net increase requirement established  
7 in the Share Bill that wasn't ultimately  
8 successful for a number of reasons. Just bearing  
9 that in mind, and I think with that, then there  
10 are several challenges that are especially apropos  
11 and specifically there is a recent adoption to the  
12 Energy Policy Act which replaces, of course, the  
13 Oxygenate Mandate with a RPS requirement.

14 At the same time, that sets co-mingling  
15 standards which apply for gasoline handling all  
16 the way through the gasoline chain except it  
17 doesn't include the consumer vehicle fuel tank.  
18 Of course, those co-mingling requirements stop at  
19 the nozzle.

20 Our concern would be that in the actual  
21 full use of the flexibility in that E Pact  
22 legislation that refiners may be able to offer in  
23 the marketplace a blends of fuel that have zero  
24 oxygen and some that have, you know, oxygen levels  
25 in the low blend percentages. Then of course a

1 co-mingling of those two fuels can increase  
2 evaporative emissions as a result of the  
3 volatility increase.

4 That is kind of one initial challenge I  
5 think we still need to struggle with relative to  
6 this report. The second is a recent study which  
7 was made reference to by Tom Koehler earlier, of  
8 course, that is the CRC Coordinating Research  
9 Council E-67. What I think is most salient in  
10 that report were some very important findings with  
11 respect to the other emissions that weren't really  
12 recognized.

13 What that study found was that when you  
14 compare E-0 compared to E-10 and MOG emissions  
15 increased 14 percent, formaldehyde emissions  
16 increased 14 percent, benzine emissions increased  
17 18 percent, 1 3 butedine increased 22 percent, and  
18 acid analdihyde increased 73 percent.

19 We view that as basically sobering data  
20 which the working group needs to carefully  
21 consider as you shape this policy, particularly in  
22 light of the needs to remain compliant or  
23 consistent with the Federal Clean Air Act.

24 I think that leaves one to really focus  
25 perhaps more on the appropriateness of an E-85

1 strategy while you are still working through some  
2 of these inherent complications on the low level  
3 blend issue.

4 The other thing that points out to us is  
5 that there has been a 36 year history of the  
6 Federal Clean Air Act mandates and requirements  
7 that California has been subject to, and your  
8 consultant I think made some rather easy and  
9 perhaps simple suggestions about just simply  
10 eliminating these conflicting regulations that  
11 flow from that, but I don't think we are really in  
12 a position to just simply throw out those criteria  
13 emission obligations. In particular, that  
14 California has had an approach to regulating  
15 greenhouse gas emissions on the vehicle side,  
16 which do not offset those reductions by some  
17 increase in the criteria emissions. Just the  
18 opposite, ARB is very appropriate approach has  
19 been to get reductions in both of those rather  
20 than some net calculus. While there is this  
21 notion of a net benefit calculation that one can  
22 perform analytically, to use that as a basis for  
23 public policy is something I think we want to be  
24 very careful about.

25 The other thing we might point out is

1     that there was an assertion made that these  
2     permeation emissions should be considered as  
3     "transitory". It is transitory in the sense that  
4     it would take several decades for the entire motor  
5     vehicle fleet to turn over, but we don't consider  
6     that transitory, you know, in the near term.  
7     Unfortunately because of the scale of those  
8     emissions, they are in the scale of 30 to 50 tons  
9     a day, and by comparison our Board adopts a tenths  
10    of tons per day hydrocarbon control measure.  
11    The scale of that permeation emission mitigation  
12    challenge is quite high.

13           The last thing I would want to point out  
14    is that there were some comments made about CO and  
15    Vox interchangeability or substitutability. We  
16    would point the working group, of course, the  
17    important work that ARB has done specifically on  
18    that question, a recent report which found or  
19    suggests that the VOC to CO ratio is relative to  
20    their ozone full length potential is still quite  
21    biased if you will or it is heavily emphasizes the  
22    need for VOC control. I think you need about 50  
23    grams of CO control to the equivalent to a gram of  
24    VOC control relative to peak ozone.

25           With that, we commend the effort to try

1 to pull together these challenges. There is a lot  
2 of new data out there to synthesize, and we  
3 certainly respect there is a lot of value broadly  
4 to try to energize the biofuels industry, and we  
5 want to work as a very active and sincere partner  
6 in that effort.

7 Thanks for this opportunity.

8 PRESIDING MEMBER BOYD: Thank you, Paul.

9 Any questions for Paul?

10 UNIDENTIFIED SPEAKER: At a biomass  
11 conference in Fresno a month ago where  
12 Commissioner Geesman spoke, Sharon Schumaker of UC  
13 Davis, many of you know her, pointed out that  
14 emissions seem to peak at about E-22, and we may  
15 be focused on the wrong end of the spectrum in  
16 terms of emissions, that big oil would like us to  
17 stay focused on E5 to E15, then we will not put  
18 the effort in that we should into looking at what  
19 is on the other side of (inaudible). Have you  
20 looked at (inaudible)?

21 MR. WUEBBEN: Well, there is limited  
22 data. I respect very much what you are saying as  
23 far as that there is a point at which volatility  
24 starts to go down. For example, I think everyone  
25 knows or should know that E85, for example, has

1 much lower volatility than say baseline gasoline.  
2 That tipping point is somewhere in the what looks  
3 like about 30 to 40 percent, maybe 50 percent,  
4 depending on the T50 and the other components in  
5 the gasoline.

6 I think that a lot more data is probably  
7 necessary to sort that out, but it is something  
8 that would be valuable.

9 UNIDENTIFIED SPEAKER: How long would it  
10 take to get that data?

11 MR. WUEBBEN: Boy, that is kind of  
12 speculative. These studies, unfortunately, cost  
13 millions of dollars. When the original odd oil  
14 study and Dean is smiling there because he knows  
15 better than I, the tens of millions I believe was  
16 spent to look at very detailed matrix, maybe 50.  
17 It could have been in the range of 30 to 35  
18 million dollars.

19 Now at the other end of the spectrum, I  
20 would say that is still perhaps a reasonable  
21 investment if you are talking about a national  
22 fuel policy. Unfortunately, we don't have the  
23 amount of data that we had guiding us as we did  
24 say in 1990, 1995 even. So, we are kind of  
25 playing catch up, but there are needs there to be

1 addressed.

2 PRESIDING MEMBER BOYD: I note that a  
3 couple of the presenters today, at least two  
4 presentations I recall did call for kind of a  
5 study of gasoline and ethanol and maybe delving  
6 into the kind of question that was just put on the  
7 table is there some acceptable or even positive  
8 ratio or some changing of the formulation that  
9 would facilitate an energy policy and an  
10 environmental policy, but I think Mr. Wuebben is  
11 right, that it takes a lot of money and a lot of  
12 time to do that, but perhaps we are at that  
13 juncture. Energy policy has become fairly  
14 important.

15 Any other questions? If not, we will  
16 move on. Oh, there is a question.

17 UNIDENTIFIED SPEAKER: (Inaudible.)

18 MR. WUEBBEN: We would certainly agree  
19 in terms of greenhouse gasses, that there is  
20 various substantial -- what I was contrasting were  
21 the criteria emissions, the VOC in particular, and  
22 to some degree Nox, but my emphasis was --

23 UNIDENTIFIED SPEAKER: (Inaudible.)

24 MR. WUEBBEN: I didn't make that generic  
25 statement. I wouldn't want that to be the take

1 away, but there are specific challenges with very  
2 low level blends, and she pointed out that there  
3 may be some new working space to work within  
4 perhaps, but that is inherently speculative I  
5 think without additional data. What we do know  
6 now is that those added low level blend, you know,  
7 gasoline formulations do add to the criteria  
8 emission, despite their greenhouse gas benefits.  
9 We have to contend with that since we are  
10 obligated to meet public health standards for  
11 ozone.

12 PRESIDING MEMBER BOYD: Thank you, Paul,  
13 we are going to have to move on.

14 Fred Maloney of Daimler Chrysler, then  
15 as I promised earlier, take two people on the  
16 phone.

17 MR. MALONEY: Thank you, Commissioner  
18 Boyd. Good afternoon, I am Fred Maloney from  
19 Daimler Chrysler. I am the Senior Manager of the  
20 Alternative Fuels Vehicle Program.

21 I'd like to thank the Commission for  
22 giving me this opportunity to present Daimler  
23 Chrysler views on the subject. Earlier today,  
24 Matt Peak presented five CalSTEP recommendations.  
25 As a member of CalSTEP, Daimler Chrysler does



1 support those recommendations.

2 My comments today will be brief and just  
3 focus on one item. The Draft Bioenergy Action  
4 Plan is huge, so huge and so many recommendations.  
5 We will comment most on those related to  
6 transportation. Today I would just like to  
7 address the issue of the B20, B100 specifications.

8 There is an action item which directs  
9 the Air Resources Board to establish the necessary  
10 fuel specification for B5, B20, and B100. Daimler  
11 Chrysler supports the use of biofuels, but  
12 definitely needs a specification in order to  
13 accept the use of B20 in our vehicles.

14 We currently approve the use of B5 in  
15 all of our diesel vehicles, and beginning in 2007,  
16 we are going to approve the use of B20 in our Ram  
17 pick up for fleet use. There is a certain amount  
18 of risk there, but we believe it is limited  
19 because fleets take good care of their vehicles  
20 and we are confident that they will use a good  
21 fuel. The fuel is basically the military spec  
22 fuel.

23 Currently we also ship all of our Jeep  
24 Liberty diesel vehicles with B5, so we do support  
25 biodiesel.

1           We are taking this step because we are  
2   confident that the fleets will use the appropriate  
3   fuel. Daimler Chrysler would like to extend this  
4   approval for the use of B20 to all of our diesel  
5   vehicles, but we need to be confident that a  
6   quality fuel is available at retail before we can  
7   do that.

8           We are engaged now in determining what  
9   those specifications should be and would like to  
10   work with ARB and other agencies to come up with a  
11   national fuels specification. Just having a good  
12   fuel in California is great, but it doesn't take  
13   care of our issue where we sell vehicles across  
14   country, all across the country, and we do hope to  
15   bring more diesel vehicles to California.

16          As I said, we are engaged with other  
17   companies, Bosch being one, and we would like to  
18   get engaged with the Energy Commission and ARB.  
19   We believe that the use of biodiesel is going to  
20   increase. We need to get ahead of it to protect  
21   our investment in our vehicles and our investment  
22   in our customers. That is all I have.

23          PRESIDING MEMBER BOYD: Thank you, Fred.  
24   A question. I mean I hear you when you say we  
25   really need a national standard, and, of course, I

1 understand a national standard would be the most  
2 desirable instead of forcing states to go it alone  
3 like they have done in a few other areas, but we  
4 have also heard some recommendations today that  
5 getting a national standard is a long drawn out  
6 process. So, would Daimler Chrysler be moderately  
7 comfortable if California took the advice of some  
8 of the people earlier today and just set out on  
9 its own to set a standard? I presume they would  
10 try to harmonize as best as where ASTM might be  
11 going, but perhaps implement it quicker than that  
12 process. Would you please reasonably comfortable  
13 with that?

14 MR. MALONEY: I would be very  
15 comfortable with that as a start, but I would like  
16 to see ARB work with the EPA and try to push the  
17 standard that way. ASTM is a slow process. ARB  
18 can be a very fast process, sometimes too fast.  
19 The same with the EPA, but I think on this  
20 particular issue, we can all come together.

21 PRESIDING MEMBER BOYD: Okay, I  
22 appreciate that. There is a question from the  
23 lady in the back, and a question over here next.

24 UNIDENTIFIED SPEAKER: A month ago --

25 PRESIDING MEMBER BOYD: Can you tell us

1     who you are?

2                 MS. MORGAN:  Alyssa Morgan (inaudible).

3     A month ago in San Diego at the big National  
4     Biodiesel Conference, a representative of the DOD  
5     got up and said that they had conducted tests  
6     (inaudible) driven by the marines at Camp  
7     Pendleton on biodiesel.  They had done these tests  
8     on ten engines (inaudible).

9                 MR. SIMEROTH:  Actually I was there on  
10    the same panel.  I think my response at the time  
11    is I am very anxiously looking forward to seeing  
12    the data.  I am still doing that actually at this  
13    point.  We haven't seen it yet.

14                PRESIDING MEMBER BOYD:  Oh, you are  
15    still anxiously waiting, okay.

16                MR. SIMEROTH:  I am still anxiously  
17    waiting.  Also at that time is where we announced  
18    that we are going to be trying to do some of this  
19    testing ourselves to look specifically at the  
20    California situation and the NEL grease situation  
21    in particular.  There is a fair amount data on the  
22    soy drive and some of its blends, but very little  
23    data on the other sources, and we are going to try  
24    to fill that gap.  We are working on that contract  
25    now.

1           We will be working with the University  
2   of California Riverside to do that. Anytime  
3   people say that it is statistically not  
4   significant, it is starts making me nervous. We  
5   are, again, anxiously awaiting to see the data.

6           PRESIDING MEMBER BOYD: Thank you. Yes,  
7   back there.

8           UNIDENTIFIED SPEAKER: (Inaudible.)

9           PRESIDING MEMBER BOYD: Would you stand  
10   up, it might be a little easier for folks to hear  
11   you.

12          UNIDENTIFIED SPEAKER: (Inaudible.)

13          MR. MALONEY: Daimler Chrysler agrees  
14   you need one biodiesel that will work in any  
15   diesel if you can, on the road diesels, stationary  
16   diesels, it is best to have a single --

17          UNIDENTIFIED SPEAKER: (Inaudible) --  
18   there may be a separate standard that would have  
19   certain cost benefits (inaudible) as you would  
20   have for over (inaudible).

21          PRESIDING MEMBER BOYD: We hear you.  
22   They will have to debate that. Thank you. Alan  
23   Desault, are you on the phone still?

24          MR. DESAULT: I am.

25          PRESIDING MEMBER BOYD: Would you like

1 to speak?

2 MR. DESAULT: Again, I will try and be  
3 brief. First, the great report, and I do have two  
4 other observations. One of my concerns is the  
5 state policies going one direction, but the facts  
6 in the ground are going in a different direction.  
7 You have ethanol which is about to go in reverse,  
8 5.7 percent, that is about potentially to go a lot  
9 lower.

10 We have waste energy plants that have  
11 been pretty much fading away for quite some time  
12 in California. We have methane digesters which  
13 for the last year have been frozen. We haven't  
14 been able to get anymore approved. I think that  
15 is a big concern.

16 Let me just focus on methane digesters  
17 for a moment. I think a fundamental problem here  
18 is embodied in a New York Times article that  
19 appeared last Saturday, an op ed piece written by  
20 a Californian environmentalist representing an  
21 influential sector of the environmental community.  
22 The article basically disparaged digesters on a  
23 number of grounds as well as producing biodiesel  
24 from manure and some other things.

25 I think there was an incredible amount

1 of misinformation in the article, but it is a  
2 misinformation that is out in the environmental  
3 community and elsewhere. I think the target of  
4 the article was factory farms, but the impact is  
5 really on all potential sources of renewable  
6 energy from using methane digesters. That has put  
7 a crimp on developing new facilities. I think  
8 when you look objectively at the facts, I think,  
9 and there is a recent California Public Utilities  
10 Commission Report evaluating called the CPUC's  
11 Health Generation Incentive Program Preliminary  
12 Cost Effectiveness Evaluation Report comparing  
13 different sources of distributed generation on  
14 environmental, social, and economic measures.

15 Methane digesters came out on top and  
16 solar was in the mix there as well and did not,  
17 but there is I guess a lack of understanding of  
18 these benefits, but that lack of understanding can  
19 have an impact. We also have a regulatory  
20 community that sometimes doesn't understand that  
21 as well. There tends to be a focus on one  
22 particular aspect of an environmental impact that  
23 to the exclusion of all others, we are seeing the  
24 Regional Water Board in this case, has not  
25 approved a new digester since last year for

1 reasons that I guess I don't have the time to go  
2 into, but they are basically reasons of design of  
3 the holding containers.

4 Without a specification, the state as  
5 far as know, California is the only state to  
6 require the digesters to go through a very  
7 significant regulatory process. One that there is  
8 no specification so the designers, the engineers  
9 don't know how to build them to meet the  
10 requirements of the Water Board because those  
11 requirements are ambiguously stated.

12 We have both an environmental community  
13 or sector of it and a sector of the regulatory  
14 community, in this case looking at methane  
15 digesters which has resulted in a defacto freeze  
16 on new construction and new facilities. That  
17 impact is not just on those specific facilities  
18 which these are currently funded facilities which  
19 will lose funding this year if they don't get  
20 approval.

21 There is a message that goes out in this  
22 case to the dairy industry that these things are  
23 very difficult to get approved and why waste a lot  
24 of time and money on engineering studies and  
25 designing facilities when they are not going to



1 get approved.

2 I think that is a serious consideration.

3 I know it is a very detailed focus I've given  
4 here, but the devil is in the details when we look  
5 at all these different options on renewable energy  
6 and renewable fuels, and that is what we have to  
7 sort of fight the battles. The battles that are  
8 going on in the trenches right now are not going  
9 in the right direction in my own opinion.

10 There is a similar analogy that may  
11 apply to ethanol. There are actually a different  
12 set of issues, but there is I think some lessons  
13 to be learned from biodiesel, and historically  
14 biodiesel was considered environmentally and,  
15 again, by some sectors of the environmental  
16 community and by some sectors of the regulatory  
17 community, not an advantageous way to go,  
18 primarily because of Nox emissions.

19 The problem that has been associated  
20 with biodiesel is really a solvable one, and that  
21 is now being demonstrated. My organization is  
22 actually working under contract to EPA to  
23 demonstrate that with a proprietary product, but  
24 there may be, again, some analogy there for  
25 ethanol and some of the permeation and Nox issues.

1           I think a critical part of all this and  
2   looking at what do we do to move these  
3   technologies, these options forward, these  
4   renewable energy sources and renewable fuel  
5   sources is it really comes down to a question of  
6   attitude. You really need both a regulatory  
7   community that is willing to say what can we do  
8   versus what can't we do, and you need an  
9   environmental community that is willing to look at  
10  the issues in more than just a narrow sense, but  
11  broader implications and really participate in the  
12  solutions rather than sitting on the sidelines and  
13  talking about maybe why you can't do something.

14           If you get out in the trenches and try  
15  and solve the problems, I think that is where we  
16  are going to find the greatest opportunity.

17           So, let me close by offering to  
18  collaborate with anyone from both the regulatory  
19  sector and other sectors and the environmental  
20  community with actually developing on the ground  
21  solutions because I think, again, only by doing  
22  that are we going to be able to solve some of  
23  these problems.

24           Thank you.

25           PRESIDING MEMBER BOYD: Thank you, Alan.

1 I think we need to keep on moving along. Joseph,  
2 are you out there still?

3 MR. BLANKENBURG: Yes, I am, sir.

4 PRESIDING MEMBER BOYD: Would you like  
5 to give us a few words.

6 MR. BLANKENBURG: Yes, I would. Thank  
7 you so much. Number one, I would love to  
8 compliment the Navigant Consulting Group. They  
9 did a marvelous job on the report. I would also  
10 like to compliment the Energy Commission in  
11 getting the Navigant Consulting people. You guys  
12 did a fine job there too.

13 Anyway, my point is that there are as  
14 many of the gentleman before me have mentioned, a  
15 lot of problems. The gentleman just before me had  
16 stated some of them with methane digesters. We  
17 have to have a regulatory commission which is  
18 going to be pro-biomass.

19 More importantly, as was pointed out  
20 very early on, one of the big problems is in  
21 obtaining monies. Biomass may provide some  
22 environmental benefits, however, biomass  
23 generation has never really captured the  
24 imagination of the financial community. It hasn't  
25 created any strong desire to provide investment.

1           A long term sustainable energy credits  
2   may help. Financial people in today's market are  
3   reluctant to lend in energy, let alone biomass.  
4   To make financing generation more attractive, I've  
5   got two suggestions I'd like to make. One it  
6   relates to emissions reductions credits.

7           Some biomass fuels contain a great many  
8   emissions reduction credits, but if the generator  
9   were permitted to market them, they could provide  
10   a significant source of revenue. Obviously the  
11   more potential revenue a project has, a more  
12   palatable it is to the financial community.

13          Number two, in order to provide the  
14   financial community a level of comfort, some  
15   incentives should be provided. I have a  
16   suggestion. Low interest finance, either in  
17   conjunction with partial participation and what I  
18   am talking about is participation or the financing  
19   portions of the project that would produce the  
20   biogas because generally it is not too difficult  
21   to obtain financing on the turbine generators, but  
22   the biogas, if this is what you are fueling with,  
23   this is a different animal. There aren't enough  
24   big ones for the financial community to have had a  
25   level of comfort.

1           Those are my two suggestions,  
2 Commissioner. If anyone has any questions or  
3 wants to refute what I said, I will be very very  
4 happy to answer.

5           PRESIDING MEMBER BOYD: Will you be  
6 submitting anything in writing for the record, or  
7 how can we get --

8           MR. BLANKENBURG: Sure, I'd be happy to.

9           PRESIDING MEMBER BOYD: Would you so  
10 that we have an address so we can get back to you  
11 if we want to pursue this any further.

12          MR. BLANKENBURG: Yeah. You want me to  
13 give it to you over the phone?

14          PRESIDING MEMBER BOYD: No, if you just  
15 send it in or e-mail it in if you are sitting at  
16 your computer.

17          MR. BLANKENBURG: That is the problem.  
18 I'm not, but I'll find a way.

19          PRESIDING MEMBER BOYD: Okay, thank you  
20 very much.

21          MR. BLANKENBURG: Thank you.

22          PRESIDING MEMBER BOYD: Michael  
23 Carrington followed by Luke Tonachel and then Mike  
24 Eaves.

25          MR. CARRINGTON: Mr. Chairman, members

1 of the Commission, and members of the Interagency  
2 Working Group, I am here today to comment on the  
3 Draft Bioenergy Action Plan. Your contractor,  
4 Navigant Consulting, has prepared a comprehensive  
5 draft that addresses the subject of bioenergy from  
6 a historical perspective from the status quo and  
7 from the perspective of California's future energy  
8 needs.

9 Today I would like to address the plan  
10 as it relates to the elements of new technologies  
11 associated with gasification and pyrolysis. My  
12 comments today are related, and in follow up, to  
13 my previous recent remarks before the California  
14 Energy Commission concerning California's overall  
15 energy future.

16 On Pages 2 and 3 of the plan, under the  
17 Summary of Recommendations, the Plan correctly  
18 points out Governor Schwarzenegger's support and  
19 encouragement of the California Biomass  
20 Collaborative and his directives to the Bioenergy  
21 Interagency Working Group. Of particular  
22 important is this statement: "The policy should  
23 also reflect the substantial potential benefits,  
24 such as reducing municipal solid waste, which is a  
25 wide range of conversion technologies can

1 capture."

2 On page 3, policy item No. 3 correctly  
3 identifies the compelling need to speed up the  
4 processes by stating: "Enhance and accelerate  
5 California's existing research, development, and  
6 demonstration (RD&D) programs to address all  
7 aspects of biomass resource production and use and  
8 to capture the benefits of new technologies that  
9 use biomass resources more cleanly, efficiently,  
10 and economically."

11 Beginning on Page 3, the Plan offers a  
12 series of "high-priority action recommendations  
13 for 2006". Under this section, item 1(b) suggests  
14 the targeting of 1,500 MW of new biopower capacity  
15 by 2020. This is a needed and worthwhile goal.  
16 The question becomes how we achieve this goal in a  
17 timely and cost-effective manner.

18 Item 1(e) calls for the CEC and the  
19 California Biomass Collaborative, in collaboration  
20 with the U.S. Department of Energy to "Fund a  
21 selected number of demonstration and pilot  
22 projects that are designed to prove the commercial  
23 readiness of biofuels production technologies that  
24 use lignocellulosic feedstocks". I am concerned  
25 that this language may be excessively limiting by

1     implying that the only projects developed in a  
2     priority manner are those exclusively associated  
3     with cellulosic feedstocks rather than looking at  
4     the broader scope of gasification capabilities. I  
5     would suggest that California would be better  
6     served by not merely focusing upon biofuels as a  
7     priority matter but to also include the high-  
8     priority development of all-inclusive gasification  
9     and pyrolysis operations that not only produce  
10    biofuels but also provide us with electrical  
11    generation and the production of syngas products.

12               This is especially important in relation  
13    to the concept of an efficient and cost-effective  
14    demonstration project that would supply the  
15    taxpayers the best use of their funds and would  
16    provide your analysts with the widest scope of  
17    data to evaluate.

18               On Page 15, under "Developments in  
19    Electricity Generation from Biomass", the Plan  
20    correctly identifies a small scale biomass power  
21    plants as being less-than-efficient and it  
22    correctly recognizes the potentials of new  
23    gasification technologies. As I mentioned in  
24    previous testimony before the CEC, my partners and  
25    I are ready to work with the appropriate agencies



1 to discuss the realities of our new exclusive  
2 gasification technology partnership with General  
3 Electric that greatly increases efficiency and  
4 output significantly over previous operations.

5 Page 23, under "Policy/Regulatory  
6 Impediments", the Plan correctly identifies a  
7 number of roadblocks to bioenergy development. I  
8 strongly urge the support of efforts to  
9 statutorily restructure the definitions of the  
10 terms "conversion technology" and  
11 "transformation". This effort should be major  
12 high-priority action item.

13 Page 28 and 29, under "Need to  
14 Commercialize New Technology", the Plan correctly  
15 recognizes the potential of pyrolysis for  
16 producing "a range of products, including bio-oils  
17 and bio-based chemicals". Page 29 specifically  
18 makes the following significant finding: "In the  
19 long-run, bio-refineries-conversion facilities  
20 that could combine all of the above processes-have  
21 not yet been commercially demonstrated".

22 This recognized fact is precisely the  
23 basis for my earlier remarks above about the need  
24 to create a demonstration project that can  
25 validate the comprehensive approach. In this

1 specific regard, my partners and I would like to  
2 explore with the CEC, and all other appropriate  
3 agencies, the possibility of locating a  
4 demonstration plant utilizing our advanced  
5 pyrolysis technology.

6 I would further suggest that such a  
7 demonstration project might be sited in Los  
8 Angeles County in or near an existing MSW disposal  
9 site. Such a demonstration project could also  
10 possibly be constructed to simultaneously  
11 demonstrate not only the efficacy of efficient  
12 pyrolysis operations, but also potentially provide  
13 distributed generation site for input into the  
14 local grid for electricity, and into the gas  
15 distribution network for syngas.

16 Page 30, under "Background", the Plan  
17 cites the history of the biopower industry in  
18 California in the 1980's and further notes the  
19 relative decline of this industry over time.

20 My partners participated in these  
21 efforts in the 1980's with a plant located in  
22 Redwood City under an agreement with Pacific Gas  
23 and Electric. This previous plant operation was a  
24 predecessor to our current new advanced operation  
25 but it worked satisfactorily and produced

1 electricity while disposing of various solid  
2 wastes.

3 The plant not only worked well, but also  
4 functioned with no negative environmental impacts.  
5 If the staff is not aware of this previous  
6 operation, I will make the records available for  
7 review and they will serve as a good comparison to  
8 our new technology's increased efficiencies.

9 Page 33, under "Accelerate  
10 commercialization of leading technology  
11 prospects", the Plan correctly observes the fact  
12 that the State of California "has a unique  
13 opportunity to push these technologies forward  
14 into commercial development". The Plan further  
15 states that "now is an excellent time to leverage  
16 federal research, development, and demonstration  
17 activities as well as several bioenergy provisions  
18 in the Energy Policy Act of 2005".

19 I would strongly suggest that these  
20 activities become a high-priority item on the  
21 agenda in order to help us attain, in a timely  
22 manner, the goals that have been set for  
23 California's energy future.

24 In the quest for identifying the right  
25 kind of potential technological solutions in the

1 areas of gasification and pyrolysis, I would  
2 encourage the technical staff to be wary of the  
3 number of claims that are being made by various  
4 entities.

5 History to date has recorded a number of  
6 claims that have proven to be either less-than-  
7 advertised or downright fraudulent. There have  
8 been a number of operations that have been touted  
9 as "the solution" only to have been shut down due  
10 to technical failures and/or misrepresentations to  
11 government officials. I would encourage close  
12 scrutiny of all potential operations including the  
13 proposals I will be submitting for your  
14 consideration.

15 Earlier today, I sensed from member of  
16 the Commission and others in the audience a sense  
17 of urgency in wanting to move this forward  
18 quickly. In terms of our technology, which I'll  
19 be submitting for your technical staff to review,  
20 I think in terms of development of technology, you  
21 will find that we can speed up the process because  
22 it is here and now and exists.

23 I was pleased to hear the folks from  
24 Navigant earlier talking about the importance of  
25 the efficiency of the conversion process, and that

1 is the key, that is where we think have an  
2 outstanding edge with our partnership with GE, and  
3 your staff will be aware of that when we submit  
4 that information.

5 I submitted my remarks to the docket a  
6 couple of days ago, but I was pleased to hear  
7 Michael Theroux's comments earlier on the siting  
8 issue too and proper siting a facility to get the  
9 biggest bang for the buck for the taxpayers who  
10 are investing in it. That is why I recommended  
11 the Los Angeles site.

12 I want to thank you for the opportunity  
13 to provide input to this process, and we look  
14 forward to working with the Commission and all the  
15 agencies and all the stakeholders in guaranteeing  
16 California a good solid energy future.

17 Thank you.

18 PRESIDING MEMBER BOYD: Thank you, Mr.  
19 Carrington. Any questions by the staff or other  
20 agencies?

21 (No response.)

22 PRESIDING MEMBER BOYD: Mr. Tonachel,  
23 Natural Resource Defense Council.

24 MR. TONACHEL: Good afternoon,  
25 Commissioner Boyd and staff members supporting the

1 working group. My name is Luke Tonachel from the  
2 Natural Resources Defense Council. On behalf of  
3 the NRDC and more than 130,000 California members,  
4 I appreciate the opportunity to comment today. I  
5 certainly applaud the efforts of the Working Group  
6 to coordinate across various agencies to clean up  
7 the environment, to increase fuel choices, and to  
8 invigorate the economy.

9 The focus of my brief comments will be  
10 on the Draft recommendations that deal  
11 specifically with transportation fuels.

12 Overall NRDC supports the broad policy  
13 objectives that serve as the basis for the  
14 recommendations in the report. NRDC is a strong  
15 advocate for increased use of biofuels throughout  
16 the country and in particular we are in strong  
17 support of California and the rest of the country  
18 using cellulosic biomass to produce biofuels  
19 because ultimately they will lead to the largest  
20 reductions in global warming pollution and the  
21 largest reductions in petroleum use.

22 We encourage the Working Group to  
23 advocate for programs that leverage the state and  
24 federal funding to advance cellulosic biofuel  
25 production and deployment and noting that

1 commercialization of cellulosic biofuels will take  
2 some time, we think that California should act now  
3 to put into place the vehicle fleet and the  
4 infrastructure to be able to maximize the  
5 environmental benefits of cellulosic biofuels when  
6 they are widely available.

7           From that perspective, we think that the  
8 Working Group should emphasize the deployment of  
9 an E-85 infrastructure. To maximize the  
10 environmental benefits of biofuels production and  
11 maximize the displacement of petroleum in the long  
12 run, the state needs an extensive network of E-85  
13 retail stations and vehicles that can run on the  
14 fuel.

15           California should develop an E-85  
16 infrastructure strategy and implementation plan  
17 similar to what was done with the Hydrogen Highway  
18 Blueprint and was mentioned by Mr. Boesel and Matt  
19 Peak with details on how the stations and the  
20 vehicles should be deployed in the state and  
21 basically how much it would cost the state to get  
22 it done.

23           The state should also investigate ways  
24 to get more flexible fuel vehicles on the roads  
25 and ways to insure that the price of E-85 is

1 attractive to consumers.

2 Not only is E-85 the right choice for  
3 large scale petroleum displacement in the future,  
4 but it is also consistent with the state's current  
5 mandate to protect the environment and will be  
6 required to meet the RFS as it is proposed within  
7 this Bioenergy Action Plan.

8 Meeting a RFS of 2 billion gallons a  
9 year biofuels by 2020 while protecting air quality  
10 will require a high blend ethanol. At the current  
11 low blend level of about 5.7 percent, in 2020 the  
12 state could consume about a billion gallons of  
13 ethanol.

14 The expectation that the state can  
15 protect air quality and remain at that current  
16 blending level is uncertain. The idea that the  
17 air quality can be protected while doubling that  
18 blending level to reach the two billion gallon  
19 target is even more in doubt.

20 We know that the use of low blend  
21 ethanol in some vehicles can lead to smog forming  
22 evaporative VOC emissions through permeation, and  
23 this as Paul Wuebben has pointed out, is a  
24 significant problem, particularly in areas like  
25 the South Coast that have severe ozone problems



1 today, and they are already dealing with the fact  
2 that they don't have enough reduction measures to  
3 meet their targets. Increased emissions from  
4 permeation is only going to increase that deficit.

5 Additionally, you have to think about  
6 the fact that we are dealing with the existing  
7 fleet, and older vehicles on the road do have Nox  
8 emissions associated with using low blends.

9 Now the answer to this is that we need  
10 to mitigate these emissions, both permeation and  
11 Nox. One way to do that is get more flexible fuel  
12 vehicles using E-85 on the road because E-85  
13 doesn't bring along the same air quality  
14 liabilities, and, therefore, promoting E-85 is a  
15 way to increase biofuel used in the state without  
16 harming the air quality.

17 I want to drill down on a couple of  
18 specific statements that were made within the Plan  
19 or the recommendations to a Bioenergy Action Plan.  
20 First of all, the draft recommendation  
21 specifically called for the state to establish a  
22 "broad-based renewable fuel standard" and the  
23 definition of broad-based should be more clearly  
24 stated.

25 It is NRDC's understanding that a broad-

1 based goes beyond a low blend ethanol requirement  
2 and actually prioritizes the greater use of E-85  
3 and other renewable fuels. You know, basically,  
4 because of the reasons that I have already stated  
5 in terms of air quality, and you are going to need  
6 high blend ethanol in order to meet the aggressive  
7 target that you put out there for two billion  
8 gallons in 2020.

9 That way the air quality is protected  
10 and long-term infrastructure goals to use  
11 cellulosic ethanol are also achieved. So, the  
12 Working Group should specify that a RFS target  
13 should be met by maximizing high blend ethanol and  
14 other renewables in a way that is safe for the  
15 environment.

16 The second point is that the minimum  
17 consumption levels for ethanol should only be set  
18 as part of RFS that protects air quality. Going  
19 back to the slides that Navigant had up or looking  
20 at page 38, Recommendation F1 says that CARB  
21 should propose minimum annual statewide ethanol  
22 consumption levels to encourage in-state  
23 production opportunities until the details of the  
24 proposed state RFS are developed.

25 Since this recommendation is tied to the

1 predictive model rule making, it is effectively a  
2 temporary RFS for low blend ethanol. Minimum  
3 blending requirements should not get ahead of the  
4 predictive model process, which is really designed  
5 to protect air quality.

6 Any temporary RFS, as this would be,  
7 must have the same air quality protections as the  
8 more detailed broad-based RFS. It also should be  
9 noted that a shorter term temporary RFS has to  
10 deal with the existing fleet before it turns over  
11 in the later years. So, that means air quality  
12 challenges are even greater.

13 Therefore, the Working Group should  
14 clarify the language of the recommendation to  
15 insure that any minimum ethanol use requirements  
16 in reformulated gasoline follow the update of the  
17 predictive model and are set in the way that will  
18 protect air quality.

19 To conclude, the Bioenergy Action Plan  
20 and the March 31 report to the Governor should  
21 emphasize two actions that the state should take.  
22 No. one, develop an infrastructure deployment plan  
23 for E-85. Number two, adopt targets for increased  
24 alternative fuel use based on the findings of the  
25 predictive model review and of the alternative

1 fuel assessment that is required as part of AB  
2 1007, the Pavley Bill, which includes an  
3 assessment of alternative fuels based on their  
4 greenhouse gas performance and their petroleum  
5 reduction benefits.

6 I appreciate the opportunity to comment  
7 today and will answer any questions. Thanks.

8 PRESIDING MEMBER BOYD: Thank you. Any  
9 questions?

10 (No response.)

11 PRESIDING MEMBER BOYD: Yes.

12 MR. BERTON: Thank you. You state that  
13 NRDC supports the use of cellulosic biomass, does  
14 the NRDC have a position on the types of  
15 technologies from which that cellulosic biomass  
16 could be used for?

17 MR. TONACHEL: We don't have a specific  
18 position on the technologies. We would be more  
19 interested in looking at a performance standard  
20 for the overall life cycle of the development of  
21 the fuel and the deployment of the fuel, whether  
22 it is stationary or mobile.

23 MR. BERTON: At this point, you don't  
24 have (inaudible) a chemical, biological technology  
25 versus a thermal kind of technology (inaudible)?

1 MR. TONACHEL: That's correct.

2 PRESIDING MEMBER BOYD: Thank you, Luke.

3 Mike Eaves, California Natural Gas Vehicle  
4 Coalition, then I am going to call Steven Kaffka  
5 of the University of California Davis, and then  
6 James Siber of the US Department of Agriculture,  
7 except I don't see Mike Eaves.

8 MR. EAVES: Right here.

9 PRESIDING MEMBER BOYD: How could I miss  
10 you, Mike, I don't know. Go right ahead.

11 MR. EAVES: Yes, good afternoon  
12 Commissioner Boyd and members of the task group.  
13 A lot of comments that I had prepared have already  
14 been stated so I will not go over that, and I will  
15 be submitting some detail --

16 PRESIDING MEMBER BOYD: We appreciate  
17 that, and I would encourage others in the audience  
18 if it is a me too, me too will suffice and move  
19 onto your more cogent points. Thank you very  
20 much, Mike, now that I see you clearly.

21 MR. EAVES: I do commend the Commission  
22 and the task group for accomplishing a great deal  
23 since August in evaluating the potential benefits  
24 of bioenergy industry. I think one of the things  
25 that still has to be done is we have to quantify

1 the benefits in all those areas to really get a  
2 handle on the type of support that the state  
3 should be able to offer the industry.

4 I know that is part of the process that  
5 you've done before. We do support the  
6 recommendations. We do have some issues with some  
7 of them, but I think in total, I think that they  
8 are very comprehensive, and we support those  
9 moving forward.

10 John Boesel mentioned this morning and  
11 now I am again this afternoon that there are a lot  
12 of options for bioenergy are in there. There is  
13 not a lot in here about biomethane. We would like  
14 to see that added to the list of technologies on  
15 the diagrams there.

16 I think that is kind of key because in  
17 Europe they are using biomethane to augment their  
18 natural gas supply systems and also using it for  
19 vehicle fuel, either in compressed or liquified  
20 form. So, I think it would be appropriate for the  
21 Commission to include that in the report.

22 One of the things that I was very  
23 interested in going through the report was while  
24 it appears that this bioenergy sector is unique in  
25 many respects, which it is, I would like to see

1 the Commission use the same template in the future  
2 for their evaluation of all alternative fuels in  
3 terms of capturing all the benefits and quantify  
4 those benefits to California and to society.

5 I don't think in terms of the bioenergy  
6 sector, I think there is a huge capital cost. The  
7 industry faces financing in the natural gas  
8 vehicle industry that capital hit is not in the  
9 production end, but is in the vehicle end or in  
10 the infrastructure end. So, I think all  
11 technology have regulatory market and technical  
12 barriers that need to be overcome, and we would  
13 strongly suggest that you use that template in the  
14 future for the other fuels.

15 I realize while the Governor has  
16 directed this specific report, we strongly suggest  
17 that the report back to their recommendations to  
18 the Governor include a short paragraph that says  
19 that this same process will be applied to other  
20 alternative fuel evaluation as part of the 1007  
21 report that is due out next year and that this  
22 report and recommendations along with those  
23 recommendations will offer up a suite of multi-  
24 fuel opportunities for the state.

25 I recognize that this is specifically

1 bioenergy, but I think if you could put in that  
2 qualifier that these other process fuels are going  
3 to be evaluated in the same context, I think that  
4 would be helpful.

5 Thank you.

6 PRESIDING MEMBER BOYD: Thank you, Mike.  
7 Any questions.

8 (No response.)

9 PRESIDING MEMBER BOYD: Mr. Kaffka, if I  
10 am saying that correctly.

11 MR. KAFFKA: Very well. Hello, I am  
12 Steve Kaffka, and I am an Agronomist with the  
13 University of California Davis in the Department  
14 of Plant Sciences.

15 I have some crops that I work on  
16 particularly, in this case sugar and oil seed  
17 crops, so I was very pleased to hear Secretary  
18 Jones one of my favorite crops, sugar beets,  
19 earlier.

20 I also am the Director of the  
21 University's long term research product which is  
22 specifically focused on the issues of bio-physical  
23 issues of agricultural sustainability. I read the  
24 technical report with great interest, and what I  
25 would like to do is start with some small items,



1     which struck me as an agronomist that I should be  
2     commented on briefly, but then go on to some  
3     larger issues that connect the use of biomass and  
4     the creation of biofuels from the California  
5     agricultural landscape and the issue of  
6     agricultural sustainability.

7             I noticed a number of mentions of soy  
8     beans, for example, in the report, and, in fact,  
9     soy beans are not grown in California, an earlier  
10    comment or made a comment about that. They have  
11    been tried a number of times, there have been a  
12    number of obstacles to their use, they are not  
13    well adapted to California and they are very much  
14    ridden with pests and diseases here.

15            It doesn't mean there couldn't be a soy  
16    bean program at some point in the future, but that  
17    it would not be an instant start up, and it would  
18    take development and investment in agricultural  
19    science.

20            We do, however, have oil seed things  
21    like safflower, which is extremely well adapted  
22    and is a very high quality initial feedstock. We  
23    also could produce something like canola, which is  
24    another oil seed and grows more or less like  
25    winter wheat here on rainfall.

1           We also have a lot of emphasis on corn  
2 mentioned. Of course corn is the primary source  
3 for ethanol currently in the United States, but a  
4 crop that is also well adapted to California and  
5 it grows on winter rainfall and is adapted to salt  
6 tolerant. It is a very salt tolerant crop  
7 something like barley.

8           I think there needs to be some broader  
9 sense in this report, perhaps even mentioning  
10 certain critical crops that are more suitable.

11           That leads me to a larger point, which  
12 is I think that in this whole process that the  
13 public should make full use of the terrific  
14 agricultural science research capacity that exists  
15 in the University of California, particularly  
16 Davis and at the Riverside and Berkeley campuses  
17 as well. I know there are a number of capable  
18 scientists that would be happy to participate in  
19 this.

20           With respect to dedicated energy crops  
21 and dedicated energy crop production, those who  
22 have looked at that realize that they are very  
23 marginal in terms of a cost effective basis. Part  
24 of the reason is they tend to be low value crops.  
25 In fact, to be useful as feedstock for energy,

1     they have to be low value.  What I would like to  
2     recommend is that we consider in most production  
3     systems that those production systems are used for  
4     multiple public purposes.

5             For example, the recycling of bio-solids  
6     and the production of those crops, the reuse of  
7     waste water, the reuse of saline drainage water,  
8     things that have a number of public benefits could  
9     be bundled together in production systems in  
10    creative ways with due consideration for the  
11    sustainability of those production systems.  In  
12    fact, that may enhance the value of direct crop  
13    production of those purposes that go beyond simple  
14    cost and enterprise budgets associated.

15            Another thing I would like to point is  
16    that it is fairly easy to estimate biomass or  
17    maybe not so easy to estimate it and make  
18    calculations about how much energy could be  
19    withdrawn from those.  Those kinds of calculations  
20    don't necessarily take into account the kinds of  
21    complex adjustments that may take place in real  
22    world systems.

23            Agricultural systems are not machines,  
24    they are biologically based and there are slow  
25    rate variables, things that change slowly, and

1 making changes often have unanticipated  
2 consequences that lag in time relative to the  
3 point in which time has changed.

4 For instance, secondary effects might be  
5 when you are removing most of the carbon from  
6 these systems effects on soil quality and on the  
7 long term future productivity of these systems.

8 What I would recommend in this case is  
9 when RFP's come forward for the development of  
10 research and development projects that some  
11 consideration be given to the possible secondary  
12 effects and longer term consequences, slow rate  
13 and unanticipated consequences of energy  
14 production systems.

15 For example, we have other things going  
16 on in agriculture now. There is a movement in  
17 California towards reduced tillage or no-till  
18 systems. Those systems, in fact, require residue  
19 on the ground. There is also pressure for farmers  
20 to get credits for storing carbon in the soil.  
21 That means an increase in the recycling of carbon  
22 into the soil and not necessarily its removal.

23 None of the things are necessarily  
24 obstacles to the development of these industries,  
25 but they need to be considered as part of the

1     wholistic system's analysis that involves  
2     agronomic and other considerations.

3             The consideration of this type of  
4     complexity leads to some other considerations.  
5     Farmland preservation becomes an issue, no  
6     farmland, no biomass from farm crops. The  
7     availability of water for irrigation becomes an  
8     issue. Plant dry matter production is a linear  
9     function or vapo-transporation, no water, no  
10    biomass. No biomass, no feedstocks.

11            I noticed today there was another  
12    lawsuit filed to the endangered species status of  
13    the Delta Smelt. Anything that reduces the supply  
14    of water to agriculture will reduce the amount of  
15    feedstock available.

16            The role of regulatory agencies has been  
17    mentioned by other people at other times. I think  
18    there is a number of standards that affect  
19    agricultural production systems, the Air Resources  
20    Board and the State Water Resources Control Board  
21    are two agencies in particular that have direct  
22    effects on the nature and operation of  
23    agricultural systems.

24            For instance, air quality standards that  
25    affect dairies. While I won't argue with their

1 importance, but anything that makes it  
2 economically unfeasible for dairies to operate in  
3 California will have a large effect on the  
4 creation of ethanol from grain stocks in  
5 California.

6 As mentioned earlier, and I thought it  
7 was a very appropriate comment, I guess it was  
8 Secretary Jones again, you have brewer's and  
9 distiller's waste from the fermentation of corn or  
10 barley or whatever the feedstock is. That is a  
11 wet waste that has to be disposed of. Well, it  
12 has excellent use in the feeding of cattle,  
13 particularly dairy cattle. If you don't have the  
14 dairy cattle, you don't have a good efficient low  
15 cost use for the waste product. Not to mention  
16 the benefits that might come from (indiscernible)  
17 fermentation of manure and methane digestion and  
18 so on.

19 Those kinds of things have to be  
20 considered. The reuse of saline drainage waters  
21 or waste waters or waste waters from cheese plants  
22 or food waste industries all involve the State  
23 Water Resources Control Board, and some creative  
24 flexibility in the regulation of those issues and  
25 in their reuse and reventing and agricultural

1 systems will provide low cost resources for bio-  
2 mass production, which I think can be done in a  
3 sustainable manner. It requires a certain amount  
4 of flexibility.

5 I already know of one substantial dairy  
6 investment that has left California, almost a  
7 billion dollars, moving to Texas because of their  
8 regulation issues.

9 We may not have needed another 120,000  
10 cows or so or 150,000 cows in California. I don't  
11 know what the right number would be, but if the  
12 cows aren't there, they are not there to make use  
13 of these bi-products and create opportunities.

14 The last comment I would make for this  
15 process to be successful in my view, there has to  
16 be some way of mediating or discussing or creating  
17 a process in which sometimes conflicting  
18 regulatory standards and regulatory interests at  
19 least can be voiced together.

20 There has to be some way of assessing  
21 trade-offs across various environmental goods and  
22 services. So, I would recommend that there be  
23 some mechanism set up for trying to address those  
24 conflicting goods and services and resource  
25 conservation issues and environmental goals and

1 values that will come into play. Otherwise, I  
2 think they are going to end up -- people have  
3 talked about all of these regulatory difficulties  
4 and discontinuities, those things I think will  
5 hinder the long term and even short term  
6 development of at least agricultural base systems  
7 for recycling and reuse in biomass production.

8 PRESIDING MEMBER BOYD: Thank you for  
9 your testimony. In response to a couple of your  
10 points, and I would comment that the purpose of  
11 having an interagency group work on this is to try  
12 to address some of those very points that you  
13 raised in your concluding remarks. Your remarks  
14 were on point and well received.

15 With respect to your call to utilize the  
16 resources of the University in pursuing this  
17 issue, is something, of course, that we have  
18 recognized in the past. One of the purposes of  
19 creating the Biomass Collaborative and then  
20 housing it at UC Davis was to do just that, to  
21 take advantage of the resources of the University  
22 system, particularly Davis with its talents in  
23 this area.

24 I can only assume, therefore, you all  
25 talk to each other --



1 MR. KAFFKA: Yeah --

2 PRESIDING MEMBER BOYD: -- about these  
3 issues. I know how it is for agencies and sub-  
4 agencies to talk to each other about the same  
5 problem, but I am glad to hear that you do that  
6 over there at the University and we are getting  
7 the benefit of the best minds, out of the  
8 Collaborative anyway.

9 Professor Jenkins, who was here earlier,  
10 I don't see now -- oh, there he is. Hi, Brian.  
11 He sits with us often in our debates on this  
12 issue, so we depend on him to be the conduit from  
13 you for some of these issues. Thank you very  
14 much.

15 MR. KAFFKA: Thank you.

16 PRESIDING MEMBER BOYD: Mr. Seiber.

17 (No response.)

18 PRESIDING MEMBER BOYD: Didn't make it  
19 perhaps. Eric Bowen, and then I am going to call  
20 on Coby Skye and then Steve Brink.

21 MR. BOWEN: Good afternoon. My name is  
22 Eric Bowen. I am an investment banker with Sigma  
23 Capital. Sigma Capital Group provides investment  
24 banking services to the renewable energy sector.  
25 I am in particular focused on helping biofuel

1 plants get financed. I am also a very active  
2 member of the Environment Entrepreneurs, otherwise  
3 known as E-2.

4 We first off would like to start by  
5 thanking the Commission, in particular thanking  
6 Commissioner Boyd for all of your very important  
7 work here on biomass and biofuels in particular.

8 I am one of the co-chairs of E-2's  
9 California Biofuels Team. We were very active  
10 along with NRDC in sponsoring AB 1007 last year.  
11 AB 1007 for those not familiar, is an alternative  
12 transportation fuel bill that asks the CEC to work  
13 with ARB and the Department of Agriculture and  
14 others to come up with an index to rate all fuels  
15 including petroleum and renewable fuels on their  
16 petroleum reduction characteristics and their  
17 greenhouse gas characteristics.

18 I think that is an important piece of  
19 legislation to keep in mind in the context of  
20 today's presentation and how that AB 1007 process  
21 will fold back into the important work that the  
22 Biomass Collaborative has done in particular with  
23 regard to how we move forward with biofuels.

24 I'd like to first comment briefly on a  
25 few areas of the report and my comments will all

1 be related to the fuel section report that  
2 Environmental Entrepreneurs or E-2 feels  
3 particularly strongly about and would like to  
4 encourage the Commission to pursue.

5 First off with regard to renewable fuel  
6 standard. This is something we think is a great  
7 idea for California. We definitely believe that a  
8 broad-base approach is far preferable to a blend-  
9 specific approach. This would be both with regard  
10 to gasoline and diesel.

11 Broad-base approach allows the market to  
12 do what the market does best to find the most  
13 efficient and economical way to get those fuels  
14 into the system. Also from an air quality  
15 standpoint, allows to get the higher blend  
16 ethanols out there meeting RFS requirements rather  
17 than a lower blend ethanols. We believe the  
18 higher blend ethanols have the greater ability to  
19 improve air quality.

20 I also would really encourage the  
21 Commission to come up with specific proposals on  
22 how to encourage the cellulosic demonstration  
23 plants. California has a lot of biomass  
24 resources, but our agricultural land is a very  
25 very high value. Our water is a very very high

1 value. We are not going to be growing lots of soy  
2 beans or corn or canola, pick your biofuel crop  
3 here choice.

4 What we do have is a lot of excess waste  
5 agricultural material. If we can harness this  
6 material to make our biofuels, everyone in this  
7 state will benefit. Not only will we have the  
8 renewable fuels that we would like to have, we  
9 will create a new industry and new jobs. So, this  
10 is a technology that has been mentioned many times  
11 today. It is fairly early stage. Plants are in  
12 development. There are none in California. If we  
13 can find a way to get demonstration plants in  
14 California taking things like California rice  
15 straw, turning that to cellulosic ethanol, that  
16 would be an enormous benefit for California. I  
17 would encourage the Commission to push those sorts  
18 of efforts.

19 With regard to the current process the  
20 ARB is going through with regard to RFG-4, we  
21 think there is a great opportunity here to look at  
22 RFG-4 with regard to the future of where we would  
23 like to be and make sure that RFG-4 is designed in  
24 such a way to be flexible to incorporate a maximum  
25 amount of biofuels possible.

1           Dean, I appreciate all the work you have  
2     done. If you could bring that message back to the  
3     ARB. I know you have heard it several times, I  
4     would just like to reiterate it here today.

5           Another proposal that I think is very  
6     very important is that the CEC report says that we  
7     would like to direct the state agencies to  
8     purchase biofuels, as mentioned specifically B20  
9     and E-85 and encourage public institutions and  
10    local government to follow the state's lead.

11          This is absolutely necessary. I've done  
12    a lot of work with the City of San Francisco.  
13    We've incorporated biodiesel into the City's fuel  
14    contract for the first time. Both the fire  
15    department and the Muni are looking at using  
16    biodiesel in their fleets. The fact of the matter  
17    is that it is difficult -- the hardest part quite  
18    frankly is finding funding. If we could get the  
19    state to make a big push down this effort, bring  
20    volumes up, bring prices down, it really help  
21    progressive cities like San Francisco, who would  
22    like to follow the state's lead.

23          The reality is at this point, the state  
24    is not leading which is leaving cities like  
25    Berkeley and counties like Marin who need to take

1 the lead. While that is great, if we can get the  
2 state taking the lead reinforcing the work, we can  
3 bring many more cities and counties on board and  
4 greatly drive the demand for these products,  
5 increase their volumes, and bring the prices down.

6 I'd also like to thank the Commission  
7 for the recommendation for more research  
8 development and demonstration projects. We  
9 definitely need that here in California. We have  
10 not had enough money going in to RD & D. We need  
11 something along the lines of the California  
12 Hydrogen Highway Project for biofuels. It would  
13 really help jump start all of the goals and  
14 efforts we are trying to make here today.

15 I would like to tie this back a little  
16 bit into the AB 1007 process and comment on one  
17 particular proposal that is mentioned in Section 6  
18 3(b) where the CEC recommends the potential  
19 elimination of excise tax for biofuels.

20 There are two general frameworks that  
21 have been pursued throughout the country with  
22 regard to encouraging biofuels at the state level.  
23 One has been a mandate model where specific blends  
24 are specified like the B2 Minnesota Mandate. A  
25 version is what Washington state recently passed,

1     which is a volumetric mandate but not necessarily  
2     specifying a blend.

3             Another approach is the incentive  
4     approach.  Probably the best example would be the  
5     State of Illinois where they have eliminated their  
6     state taxes on certain blends of biofuel.  In the  
7     case of biodiesel, it happens to be blends above  
8     B11.

9             If you look at what happened last year,  
10    you will find that states like Illinois that  
11    provided the incentive structure actually created  
12    far more demand than the mandate states.  That is  
13    simply because when you can change the economics,  
14    the market will harness the power of that and  
15    create far more demand than any government mandate  
16    could create.

17            I would highly encourage you to look at  
18    some incentives like the one you have proposed  
19    here.  As I look at the political dynamic in  
20    California, anything that is going to take funds  
21    out of the Highway Fund is going to be very very  
22    difficult.  Getting anything through our  
23    Legislature involving taxation with two-thirds  
24    requirement is virtually impossible.

25            We have been thinking about ways we can

1 do this in a revenue neutral way and how this can  
2 tie back into our greenhouse gas reduction goals  
3 and the work we have been doing with AB 1007.

4 What I would like the Commission to consider today  
5 is a proposal something along the following lines.

6 Focus on getting the AB 1007 index done  
7 this year in 2006 so we can use that as a platform  
8 for legislation in 2007. Take the index that we  
9 will have created with regard to greenhouse gasses  
10 and change the current excise tax system from an  
11 excise tax system to a greenhouse tax system.  
12 Keep the pool of money the same so that the  
13 Highway System continues to get all the necessary  
14 infrastructure funds that it needs. Have  
15 different levels of taxation on the fuel based on  
16 its greenhouse gas characteristics.

17 A fuel that had zero greenhouse gas  
18 emissions would get absolutely no excise tax. A  
19 pure petroleum base fuel would get a slight bump  
20 up, and so in the case of diesel it is 18 cents,  
21 maybe that would move to 19 cents.

22 This would allow the state to maintain  
23 its infrastructure funding at its current levels  
24 and would allow the fuels that we like, the fuels  
25 that we think displaced the most petroleum,



1 decreased the most greenhouse gas to have  
2 preferences in the marketplace and could be a very  
3 very powerful tool.

4 This is something that would help the  
5 Governor achieve his greenhouse gas reduction  
6 goals. This is something that the  
7 environmentalists would get behind because it  
8 supports the type of fuels we want to see in the  
9 marketplace. I think it is this sort of creative  
10 thinking that if we can get legislative proposals  
11 together for the 2007 Legislative Session, that we  
12 can create real incentives in the California  
13 marketplace to again let the market do what it  
14 does best to create demand for the products that  
15 we like and drive true demand to help us reach our  
16 biofuel and greenhouse gas reduction goals.

17 The final thing I would like to say is  
18 to emphasize what Luke said with regards to  
19 promotion of E-85 in California. With regard to  
20 the two billion gallons by 2020, that is a goal  
21 that we absolutely support. We would like to see  
22 it done in the most environmentally beneficial  
23 way. We believe that is through high blend  
24 ethanol. Until we get infrastructure in place to  
25 support E-85, we are not going to be able to

1 accomplish those goals.

2 I know that the State of California is  
3 currently doing a fair amount of work with auto  
4 companies to encourage them to bring E-85 vehicles  
5 into the California marketplace. We should  
6 continue to do that work. I would say that if  
7 that work is not successful, we should consider  
8 mandating the flex fuel vehicles are sold in  
9 California. That is not something we should do  
10 today, but it is something that we should consider  
11 if we are not able to get the cooperation out of  
12 the car companies that we need.

13 Thank you for your time.

14 PRESIDING MEMBER BOYD: Thank you. Any  
15 questions?

16 (No response.)

17 PRESIDING MEMBER BOYD: Coby Skye, LA  
18 County.

19 MR. SKYE: Good afternoon. My name is  
20 Coby Skye. I am with the Los Angeles County  
21 Department of Public Works and I am an Associate  
22 Civil Engineer.

23 I did want to just briefly say that I  
24 really appreciate the work that the Interagency  
25 Group and all of the state agencies that have been

1 involved have done. It is just fantastic to see  
2 the results that we get when state agencies are at  
3 the table and working together. So, we hope that  
4 this continues.

5 Just to give a little bit of a  
6 background. The County of Los Angeles has been a  
7 leader in trying to develop conversion  
8 technologies to utilize municipal solid waste as a  
9 biomass feedstock. There are a number of reasons  
10 that we feel that this is a really important thing  
11 for us to focus on.

12 The project that we are trying to  
13 develop that would be a demonstration facility and  
14 the benefits from that project, we would be taking  
15 diesel trucks off the road immediately for  
16 instance. We would be reducing net greenhouse gas  
17 emissions from landfills which would be the  
18 alternative where that waste would end up. We  
19 would be getting a number of other environmental  
20 benefits. We would be producing some combination  
21 of a renewable fuel that would cut Co2 emissions  
22 on a life cycle basis. We would be producing  
23 renewable energy. The list goes on and on about  
24 the benefits from this project.

25 The road blocks that we are getting to

1 and the City of LA with us and other jurisdictions  
2 throughout this state that are trying to move  
3 forward on this, is largely from the statutory  
4 framework. There was discussion earlier, Greg  
5 Shipley mentioned AB 1090 and with work on similar  
6 legislation for years, and it seems like it is the  
7 environmental community that has been killing  
8 these legislative proposals which is unfortunate  
9 because studies off this study from all of these  
10 agencies, the Waste Board put out a fantastic  
11 report, and it showed that when you compare  
12 conversion technologies to every other solid waste  
13 management option, including recycling, you get a  
14 net life cycle benefits across the board.

15 If that is the case, we really need to  
16 see a stronger emphasis. I would hope that this  
17 agency and this working group is one way to do  
18 that to show that there is a consensus from the  
19 technical perspective that we need to move the  
20 legislation forward.

21 I know that was mentioned in the Action  
22 Plan, but we would hope that the Working Group  
23 would go to the Legislature and be direct in  
24 saying that we need legislation to move forward.

25 The other bill that was mentioned AB2118

1 we are actually opposing because currently there  
2 is a lot of ambiguity conversion technologies  
3 aren't specifically mentioned. The bill as it is  
4 currently drafted would actually say, yes, this is  
5 what conversion technology is and the state should  
6 get away from utilizing them, which is the exact  
7 opposite of what the results show from the benefit  
8 side.

9 We were kind of disappointed to see that  
10 instead of AB 1090, the replacement bill is not  
11 just watered down but actually create more  
12 barriers to developing these technologies which we  
13 really need.

14 Just one last point. It was over thirty  
15 years ago that we kind of got a shock about our  
16 dependence on foreign oil, and we are even more  
17 dependent now than we were then, and by the time  
18 we get George Bush telling America we are addicted  
19 to oil, then we are really kind of neck deep and,  
20 you know, I think maybe next year he will talk  
21 about this global warming thing.

22 In all seriousness, we have solutions  
23 that do work. We have hundreds of facilities in  
24 Europe and Asia. They are utilizing MSW  
25 feedstock. These aren't new technologies.

1 Gasification has been around for a century.

2 Fischer-Tropsch is nothing new.

3 We can develop these technologies. The  
4 biggest road block as I mentioned is the statutory  
5 thing.

6 One other comment I'd like to make is  
7 the consumer regarding E-85. My understanding is  
8 that there is one facility in all of California  
9 that you can purchase as a public member E-85 fuel  
10 which means that it is virtually impossible.

11 I can understand the rationale because  
12 there aren't enough cars on the road that the  
13 public can purchase to get E-85 fuels. The real  
14 question is why is it really that we are not  
15 mandating E-85 fuels. There really aren't good  
16 enough reasons not to do that, so I would hope  
17 that California has pushed the auto industry  
18 before to be more progressive and more proactive,  
19 and I'd love to see that so that we don't have the  
20 chicken and egg problem where the cars can take  
21 the fuels and there is no place to get it.

22 Okay, thank you very much.

23 PRESIDING MEMBER BOYD: Thank you. We  
24 do have the chicken and egg problem. All through  
25 the olympics I wanted to throw my dinner plate at

1 the screen everytime the green commercial with the  
2 yellow caps came up. There are lots of those cars  
3 running around California. There is no fueling  
4 infrastructure. You are 100 percent right. Short  
5 of mandates, I am not embracing mandates. We've  
6 got to address that. Thank you for your point.

7 Steve Brink and then Jim Stewart. I am  
8 not sure if someone is making their way around the  
9 corner or whether Mr. Brink is -- Mr. Brink, you  
10 are not here? I take it you are not. Okay, Mr.  
11 Stewart.

12 MR. MCSPADDEN: Commissioner Boyd, this  
13 is Kevin McSpadden. When you get around to it,  
14 could you go back to the telephone for a couple of  
15 more?

16 PRESIDING MEMBER BOYD: All right,  
17 Kevin.

18 MR. STEWART: Thank you very much, and  
19 thank you for being patient with all of us while  
20 we express our opinions. My name is Jim Stewart,  
21 and I am Chairman of the Bioenergy Producers  
22 Association, an association of companies including  
23 engineering firms, utilities, and waste haulers  
24 whose mission is to advance the development and  
25 commercialization of sustainable environmentally

1     preferable industries that produce power, fuels,  
2     and chemicals from agricultural, forestry, and  
3     urban sources of biomass and plastic waste.

4             We commend the Bioenergy Interagency  
5     Working Group for commissioning the preparation of  
6     the Bioenergy Action Plan and endorse its  
7     findings.  Biologically derived, renewable  
8     materials represent perhaps the most practical and  
9     most readily available resource for achieving  
10    energy independence for our state and nation.

11            For the first time, California has a  
12    comprehensive and constructive roadmap, which if  
13    implemented, could enable us to reach this goal.  
14    Conversion technologies, which produce low cost  
15    liquid and electric energy from organic wastes and  
16    hydrocarbons could provide our citizens with  
17    relief from the escalating cost of gasoline.

18            They could provide our farmers and dairy  
19    industries with productive alternatives to the  
20    open field burning of agricultural residues and  
21    the disposal of animal wastes.  They could  
22    significantly reduce greenhouse gas emissions  
23    while at the same time lowering the cost of waste  
24    disposal for our municipalities and reducing their  
25    dependence on landfills, and eliminating their



1     need to spread sewage sludge on agricultural  
2     lands, usually in some other county or state than  
3     their own.

4             Just from the 40 million tons of post-  
5     recycled municipal wastes that are placed in  
6     California's landfills each year, conversion  
7     technologies hold the potential to produce locally  
8     more than two billion gallons of ethanol for  
9     blending with gasoline, more than twice the amount  
10    that was imported to California from the Midwest  
11    in 2005.

12            They could simultaneously co-produce  
13    some 2,700 MWs of green power providing utilities  
14    with perhaps their best opportunity to meet the  
15    state's mandate for renewable electricity while  
16    reducing our dependence on coal-fired electrical  
17    power generation, the nation's leading source of  
18    industrial pollution.

19            Achieving these goals, however, will  
20    require the commitment of both the executive and  
21    legislative branches of government. I am really  
22    glad I just followed Coby Skye. The BRI energy  
23    technology which I represent will co-produce  
24    ethanol and/or hydrogen and green power from any  
25    carbon-based wastes or hydrocarbons, and it can

1     blend those in producing those products.

2             In doing so, it creates zero air  
3     emissions from the gasification step and generates  
4     electricity without combustion. These are major  
5     environmental breakthroughs. The BRI technology  
6     can produce ethanol for blending with gasoline at  
7     approximately one quarter of the current retail  
8     cost of gasoline and can market green power for  
9     low as 5 cents per KWh.

10            Our company expects to begin  
11     construction of commercial plants this year. This  
12     is not a future hope. This is present activity.  
13     We expect to build those plants in other states  
14     and nations than California because we can't  
15     permit them here.

16            We are building them in states where we  
17     have been assured of obtaining permits and from 60  
18     days to 6 months, and where these plants will be  
19     permitted as energy generation facilities, and not  
20     as major solid waste disposal facilities, as is  
21     currently the case in California.

22            I mention this only because in other  
23     state, the executive and legislative branches of  
24     government as well as their congressional  
25     delegations regardless of political party are

1 united in their commitment to implement 21st  
2 century conversion technologies for the production  
3 of low cost liquid and electric energy and are  
4 determined to take advantage of the extensive  
5 incentives for waste ethanol and waste-to-  
6 electricity plant construction contained in the  
7 2005 energy bill.

8 Incentives valued in the billions of  
9 dollars, which will be lost to California because  
10 it could take as many as three years or more to  
11 permit one of our plants in this state.

12 The prevailing statute that governs the  
13 definition permitting and operation of conversion  
14 technologies in California was written fifteen  
15 years ago, when many of these 21st century  
16 technologies had not even begun development.

17 AB 1090, which has been mentioned here  
18 today was a clean and straightforward bill  
19 sponsored by the Bioenergy Producers Association  
20 designed to update this antiquated statute and  
21 expedite the introduction of conversion  
22 technologies in the state.

23 It failed to gain a hearing in the  
24 Assembly Natural Resources Committee last January.  
25 We are now attempting to craft new legislation as

1 mentioned by Coby Skye and others, AB2118. We are  
2 trying to achieve legislation that will be  
3 acceptable to all stakeholders.

4 We are not certain that this can be  
5 achieved as Coby said. We have been forced to  
6 accept major compromises such as the elimination  
7 of diversion credits for conversion technologies,  
8 something that is of great importance to our local  
9 communities in order to move the bill forward.

10 The opposition to the original AB 1090  
11 bill was led by Californians Against Waste, an  
12 organization that has made an important  
13 contribution to the introduction of recycling  
14 programs in California. However, their primary  
15 function is to serve as an advocacy group for the  
16 traditional recycling industry and also landfill  
17 operators. In this case, their goal is to force  
18 communities to rely upon current recycling methods  
19 to meet their mandate for 50 percent diversion of  
20 waste from landfills and to slow or prevent new  
21 industries from obtaining access to California's  
22 waste streams.

23 Scott Smithline of CAW was quoted in the  
24 Los Angeles Daily News as saying, "We are  
25 concerned that demand, that hunger for feedstock

1 is going to pull materials from other traditional  
2 recycling uses." Yet, our bill fully protects the  
3 interests of the traditional recycling industry,  
4 specifically limiting conversion technologies to  
5 the use of post-recycled materials. Those 40  
6 million tons of municipal waste that have no  
7 sustainable value and are now being placed in  
8 landfills.

9 We will be watching carefully over the  
10 next several weeks to see if all stakeholders  
11 including the Legislature itself are truly  
12 committed to providing low cost liquid and  
13 electric energy for the citizens of California.

14 The Bioenergy Action Plan clearly  
15 outlines the changes in statute that are needed to  
16 implement biomass derived renewable fuels in  
17 California. We commend the authors for  
18 acknowledging that this is a key element in the  
19 plan and we offer our full support to the  
20 Bioenergy Interagency Working Group as it moves  
21 forward to implement its recommendations.

22 A few other comments based on today'  
23 testimony. We believe that financing is available  
24 for technologically and financially efficient  
25 technologies. In fact, we believe that renewable

1 energy is perhaps the most visible venture capital  
2 activity of our decade, similar to the dotcoms of  
3 the 1990's. We believe there is great interest in  
4 becoming involved in these technologies if they  
5 can perform.

6 Another comment today is regarding  
7 water. The traditional sugar fermentation  
8 technologies require on average five gallons of  
9 water per gallon of ethanol produced. In  
10 Minnesota, they are using 15 billion gallons of  
11 water a year to create their ethanol. In some  
12 cases, they are piping water 20 miles and they are  
13 drying up their aquifers.

14 Water is a major major problem in  
15 California and especially for our farmers in the  
16 San Joaquin Valley. The BRI technology that I  
17 just mentioned actually depending on the moisture  
18 content of the waste materials, can create a  
19 surplus of water, and at the very driest  
20 technology is probably would use about .4 gallons  
21 of water per gallon of ethanol created.

22 I'd also like to comment on other  
23 statements made about air resources. It is clear  
24 in CARB's own staff reports to their Board, that  
25 the introduction of ethanol has had no negative

1 impact at the very least has not impacted the  
2 trend toward cleaner air in California.

3 I wonder when we talk about the  
4 percolate and other emissions from ethanol if  
5 those in the air quality agencies have ever sat  
6 down to calculate the emissions that would be  
7 involved in the expenditure of \$180 billion that  
8 we spend to import petroleum from the Mideast and  
9 to protect the strategic interests of the  
10 petroleum companies in the Mideast.

11 I may be being sarcastic, but my point  
12 is we need in California and in the national  
13 program for balancing and netting and calculating  
14 the relative benefits of ethanol and other  
15 biofuels as opposed to the small amount of  
16 increased emissions that we may experience from  
17 them at low levels.

18 When ARAQMD mentions a 14 percent  
19 increase in certain kinds of emissions, what is  
20 that 14 percent of? It is 14 percent of some very  
21 very small emissions. I also wanted to mention  
22 that in the BRI technology, we are using materials  
23 that otherwise would go into landfills, and our  
24 technology creates a surplus of electricity over  
25 and above what is required to operate our plants.

1           Therefore, we are using zero new BTUs in  
2   the production of ethanol, and that is something  
3   that makes obsolete the current discussion,  
4   national discussion, about the energy efficiency  
5   of ethanol and the question as to whether it  
6   utilizes more BTUs to create a gallon of ethanol  
7   than it delivers. In our case, we use zero new  
8   BTUs.

9           I deeply appreciate the opportunity to  
10   talk to you. I do believe that we need  
11   coordination in all of our policy making, and that  
12   goes to the environmental groups as well.

13           In all due respect, I just spoke with  
14   Luke Tonachel who stated in answer to Fernando's  
15   question that the NRDC does not have a policy with  
16   regard to the technologies that would produce  
17   ethanol. I have the greatest and I mean the  
18   greatest respect for the NRDC and the eloquent and  
19   detailed studies and reports they have published  
20   in support of cellulosic ethanol. It also happens  
21   that the NRDC testified against AB 1090, and they  
22   were listed in the Democratic Committee Caucus  
23   Report along with CAW as being the leading  
24   opposition environmental group to that bill. That  
25   was one of the reasons why that bill failed.



1           We are talking about very very critical  
2   issues here that require thoughtful approach by  
3   everyone involved, and that is why I commend you  
4   for this current study.

5           In closing, I would say the concept that  
6   today's waste streams can become tomorrow's liquid  
7   and electric energy supersedes all other solutions  
8   in our 21st century quest for energy independence.

9           Thank you.

10          PRESIDING MEMBER BOYD: Thank you very  
11   much. Any questions? One quick question. I see  
12   darkness coming. Go ahead.

13          UNIDENTIFIED SPEAKER: Mr. Stewart made  
14   an interesting comment about what happened to AB  
15   1090. Perhaps it might be instructive to staff or  
16   those who are researching this, and I wasn't aware  
17   of the NRDC's position --

18          PRESIDING MEMBER BOYD: I am not sure  
19   they were either to be honest with you.

20          UNIDENTIFIED SPEAKER: It might be  
21   worthwhile to get a hold of whatever copies or  
22   transcripts (inaudible) of their alleged position  
23   so those issues can be dealt with so we don't have  
24   to keep recycling invalid (inaudible).

25          MR. STEWART: If I might make one more

1 comment. We talked a great deal today about the  
2 need for education. Education is critical, not  
3 only in our schools and in the public, but with  
4 our own environmental community because over the  
5 last 20 or 30 years, conversion technologies, but  
6 not really conversion technologies, gasification  
7 technologies were used to combust synthesis gas to  
8 make electricity. They still are being used to do  
9 that.

10 That combustion creates dioxin and  
11 ferans and puts it in the atmosphere. Over 20 or  
12 30 years, these technologies got a reputation in  
13 the environmental community of being what they  
14 call "incineration in disguise". Well, the new  
15 technologies are not combusting those gasses.  
16 They are capturing them, scrubbing them, cleaning  
17 them, cooling them, and in our case, feeding them  
18 to a new bacterial culture that in less than one  
19 minute, reconstructs those synthesis gases into  
20 ethanol and water.

21 It is the cooling of those synthesis  
22 gases that creates high temperature steam to drive  
23 electrical turbines and make electricity without  
24 combustion. The environmental community, no  
25 matter how much we are hoping that they understand

1     this still look at us as incineration in disguise.  
2     We have a tremendous educational program, and if  
3     we could reach out and do that, I believe we could  
4     move what we are talking about today forward much  
5     more rapidly.

6                 PRESIDING MEMBER BOYD:  Thank you.  I am  
7     sure Luke will take the message back to the  
8     organization.  Having spent part of my day  
9     yesterday with NRDC and the E2 representatives on  
10    this very subject, without getting down to  
11    legislation, I think maybe we can look for some  
12    sunshine on the topic.

13                Tom Sanford and then Louise Bedsworth,  
14    and then I am going to call on Mr. McSpadden on  
15    the telephone.

16                MR. SANFORD:  Thank you, Mr. Chairman  
17    and all those participating today.  I'm the Energy  
18    Commissioner Tom Sanford from the City of Gridley.

19                Some twelve years ago when I had hair  
20    and I was the Mayor Pro Temp of Gridley, we  
21    undertook a program to try to kind of resolve some  
22    economic issues that were brought in our community  
23    by the racheting down of burning of rice straw in  
24    the Sacramento Valley.

25                As many of you are aware, clay soils in

1 the Sacramento Valley kind of limit what you can  
2 do with that soil. It is a big ticket item in a  
3 small community like Gridley where we have kind of  
4 perpetual double digit unemployment and the like.  
5 So, we have been working on this like I say for a  
6 long time.

7 PRESIDING MEMBER BOYD: Mr. Sanford,  
8 when your hair was thick, mine was light brown,  
9 and we were both talking about the same thing. I  
10 identify with what you are talking about.

11 MR. SANFORD: We have kind of gone full  
12 cycle, and it is interesting to Brian Jenkins  
13 here. He is actually one of the first people, he  
14 and Sharon Schumaker, that I met in this process.  
15 Actually he was talking about gasification way  
16 back then, and we started looking at the sugar  
17 platform, which over a period of time because of  
18 we are pretty much saddled with very high  
19 feedstock costs. Interestingly enough, you might  
20 find it interesting anyway, we have done a fair  
21 amount of research and Air Resources has  
22 participated in some evaluations and the like, and  
23 our feedstock costs are probably slightly under  
24 \$30 a ton road sided, baled, transmitted, and all  
25 of that sort of thing.

1           You might find it interesting that the  
2   major effort the DOE's undertaken, their goal is  
3   35, so it tells you something about what is going  
4   on in Midwest for corn stover and the like.

5           We think we are maybe a little bit ahead  
6   of the curve when it comes to that. The high  
7   feedstock costs kind of drives what you can and  
8   can't do. We've been through actually two  
9   different types of sugar platforms, and because of  
10  high capital costs and insufficient yields, and  
11  significant waste streams, we've basically  
12  abandoned that. At about the same time, USDA  
13  directed us towards the first of two types of  
14  gasification and catalytic conversion that we are  
15  currently still working on and we think has pretty  
16  good promise.

17          One of them through DOE funding, we were  
18  able to participate in building a pilot plant and  
19  Aberdeen, Mississippi is currently just completing  
20  private financing for a demonstration plant that  
21  will produce four million gallons a year. We  
22  think will demonstrate lower capital costs and  
23  some yields that will make all of this an economic  
24  reality. Nothing happens unless it exists in the  
25  marketplace. We can have all kinds of incentives,

1 but unless we are competitive with petroleum, it  
2 is very difficult to mandate things without  
3 driving more jobs of the state. I don't think any  
4 of us are in the business of doing that.

5 I should also add there has been a lot  
6 of discussion earlier today about insurance  
7 programs and things to be able to guarantee  
8 various technologies. Obviously one of the things  
9 that exists in the real world are things called  
10 process guarantees.

11 I think one of the promises of things  
12 about the Gridley project, at least the Pearson  
13 technology in Mississippi is that there is a very  
14 substantial international engineering company that  
15 is very much interested in providing process  
16 guarantees and doing their own evaluation on their  
17 own nickel to be able to provide those. We think  
18 in our particular instance or at least in the  
19 instance of this kind of technology, that might be  
20 the kind of insurance that will allow the private  
21 financial community to step up and finance these  
22 kinds of facilities.

23 With regards to the program that you are  
24 undertaking here, I applaud the joint effort. The  
25 fragmentation of regulation is really a big

1 problem. The things we run into are myriad from  
2 problems with straw bale configurations on trucks  
3 with the California Vehicle Code. We have  
4 actually been fortunate enough to be able to  
5 change the California Vehicle Code. We didn't  
6 think that was possible. There is another hair  
7 loss involved in that operation.

8 When just because the configurations and  
9 not weights, it is a 20 percent increase in the  
10 cost of transportation. That is a big ticket  
11 item. I think we can work with you to try to  
12 identify some of those ag waste problems that  
13 maybe can be resolved without an increase in  
14 highway safety problems and that sort of thing as  
15 we go forward.

16 First of all, one of the things in  
17 gasification that we are seeing with both of the  
18 technologies we are looking at is that in both  
19 operating costs and capital costs, there is a  
20 significant expenditure involved in separating  
21 alcohols. If there is a way on sort of a joint  
22 agency basis for the state to maybe take the lead  
23 in looking at the efficacy of using mixed  
24 alcohols, that is something we would invite and  
25 would be happy to work with you as we go forward

1 in that regard. That is also a big ticket item in  
2 terms of the capital costs of building these  
3 plants out and also the operating cost of  
4 producing a gallon of ethanol or biodiesel for  
5 that matter.

6 The next thing that I find that I think  
7 is really important, and there has been a lot of  
8 discussion tap dancing around it here today has to  
9 do with the use by Navigant of the net  
10 environmental benefit.

11 We would certainly applaud that. Quite  
12 frankly, if you can't either legally or for some  
13 other reason employ that, then we would certainly  
14 invite this body to make that known as soon as  
15 possible because we will probably just fold up our  
16 tent and go home.

17 It has been a long struggle, and if  
18 there is one particular little deficit in terms of  
19 air quality or like that trumps all of the rest of  
20 the greenhouse gas benefits and life cycle  
21 analysis and the like, then please tell us sooner  
22 rather than later so I can bring this odyssey to  
23 an end.

24 Then just as an aside, is somebody  
25 involved in municipal government, the 939



1 discussion and the like, and we also have our own  
2 municipal electric utility. It is kind of how we  
3 got involved in this in the first place. We  
4 belong to the Northern California Power Agency,  
5 and work closely with cities in the Bay Area which  
6 have transmission problems, more significant than  
7 ours, like Santa Clara and Palo Alto and the like.

8           We've been working closely with them  
9 because we honestly believe that municipal green  
10 waste maybe an answer to a lot of problems that  
11 are basically transmission related, constraints  
12 and the like in the Bay Area and like. I think it  
13 is just important that you know that they are  
14 tracking closely, and we hope ultimately both in  
15 Gridley and in various other places in this state  
16 to be able to use municipal green waste to reduce  
17 the impacts of transmission constraints and  
18 hopefully south of the Tehachapi's to be able to  
19 have energy to desalinize salt water and stop this  
20 crazy pumping of Northern California water over  
21 the mountains.

22           With that, I'll thank you and look  
23 forward to working with you down the road.

24           PRESIDING MEMBER BOYD: Thank you.  
25 Louise, and then Kevin McSpadden on the phone. I

1 still have about fifteen cards, folks.

2 MS. BEDSWORTH: Good afternoon,  
3 Commissioner Boyd and members of the Working  
4 Group. My name is Louise Bedsworth, and I am the  
5 analyst with the Union of Concerned Scientists. I  
6 thank you for the opportunity to comment on this  
7 Bioenergy Action Plan and for squeezing me in  
8 before my deadline to get back on the road.

9 I want to focus my comments on the  
10 recommendations in the report related to  
11 transportation. First I would like to begin like  
12 most people here in just commending the  
13 Interagency Group, both for the collaboration on  
14 this issue, but even just for being able to tackle  
15 the issue.

16 Dependence on petroleum poses serious  
17 risks for the state's environment, economy, and  
18 security. UCS strongly supports California's  
19 efforts to reduce petroleum use and we supported  
20 transition to biomass based fuels that is mindful  
21 of the state's air quality and climate protection  
22 goals as part of this effort.

23 Overall, we support the recommendations  
24 by the Working Group to increase the use of  
25 biofuels in California. Clearly the development

1 of the technology and infrastructure for broad use  
2 of renewable fuels by the transportation sector is  
3 an important step to achieve our goals for  
4 petroleum reduction and climate protection.

5 In particular, it is vital that we  
6 retain the development of cellulosic biofuels as  
7 our ultimate goal, as these are the most  
8 compatible with the state's other very ambitious  
9 environmental goals.

10 In addition, the state's renewable fuels  
11 target must be set in a manner that is consistent  
12 with achieving and maintaining clean air  
13 throughout the state. For instance, simply  
14 doubling the current level of ethanol use an  
15 gasoline through a low blend strategy could  
16 achieve the goal recommended by the Working Group  
17 but could pose a great risk to air quality.

18 In fact, any increase in pollution in a  
19 non-attainment area is unacceptable, and I believe  
20 would be illegal under the California Clean Air  
21 Act and is really hard to trade off the public  
22 health impact of that increase in air pollution  
23 with much of anything. I think particularly if  
24 you ask people who live in Fresno about that, they  
25 would have strong opinions.

1           Therefore, establishing renewable fuel  
2 standards must be done within the full context of  
3 California's environmental and energy goals. This  
4 includes petroleum reduction, but also climate  
5 protection and achieving and maintaining state and  
6 federal air quality standards.

7           Ultimately, widespread use of high blend  
8 fuels such as E-85 are key to such a strategy.  
9 Then just in conclusion, I think it is crucial  
10 that we set ambitious targets for the use of  
11 renewable fuels, but it is equally important that  
12 we do so with an eye towards the future and that  
13 we lay out a very clear path to achieve that goal.

14           I think doing so is going to require  
15 more open and inclusive public process really than  
16 has gone even to this point. I think this gets to  
17 the point of one of the just previous speakers on  
18 education. I think there is a lot of need for  
19 education in a lot of communities. I think the  
20 environmental community has something to offer,  
21 clearly fuel providers have something to offer. I  
22 think it was mentioned automakers have something  
23 to offer to this process.

24           I think going forward, this is a very  
25 serious target that the state would be pursuing,

1 and I think we have to do it, including all  
2 relevant parties and interested parties.

3 Basically, going forward I just suggest  
4 an open and inclusive process that sets clear  
5 targets, not only for petroleum reduction but also  
6 for air quality and climate protection, but  
7 identifies pathways and benchmarks for achieving  
8 these targets and relies on sound technical  
9 analysis and public process.

10 Thank you.

11 PRESIDING MEMBER BOYD: Thank you. Mr.  
12 McSpadden.

13 MR. MCSPADDEN: Thank you, Commissioner  
14 Boyd. My name is Kevin McSpadden, and I am with  
15 the law firm of Millbank, Tweed, Hadley, and  
16 McCloy in Los Angeles. I am here representing  
17 Sylvan Power Company.

18 I also have an align Sandy Lawnsdale who  
19 is with the company who will also just speaking  
20 very briefly. We just have a few brief comments  
21 that we basically wanted to follow up, comments  
22 that have been made earlier by one of the other  
23 speakers.

24 Just for purposes of background, Sylvan  
25 Power Company entered into a power purchase

1 agreement with Southern California Edison Company  
2 pursuant to SCE's 2004 RFO for renewable  
3 resources.

4 The fuel that we have proposed to  
5 utilize for this project would be coming from  
6 federal lands as mentioned by one of the earlier  
7 speakers, there is certain regulatory legislative  
8 impediments to the use of fuel derived from  
9 federal lands that we wanted to just briefly  
10 describe to you.

11 The earlier speaker mentioned the  
12 potential for this resource that is available on  
13 federal lands, and he stopped short. He indicated  
14 that there were some barriers that existed to  
15 attain this biomass on the federal lands, and so  
16 we just wanted to describe to you some of the  
17 barriers that we see that exist that are hindering  
18 the development of biomass projects utilizing this  
19 wood and wood waste from federal lands.

20 Sandy is just going to describe to you  
21 very briefly the potential resource that would be  
22 available if some of the regulatory impediments  
23 that currently exist were lifted and this fuel was  
24 made more widely available for use in biomass  
25 facilities in California.

1           I have also asked him to describe the  
2   Federal Healthy Forest Initiative for you. I  
3   didn't see any mention in the biomass plan on the  
4   Healthy Forest Initiative. In general, what this  
5   is it is federal legislation that is similar to  
6   California's objective. It provides for the  
7   maintenance of federal lands for bio-prevention  
8   purposes and for forest trimming and pruning.  
9   Sandy will just briefly describe to you the  
10   Healthy Forest Initiative, and then I was just  
11   going to describe to you what the current  
12   impediments are to development of -- I'm sorry, to  
13   the use of wood and wood waste that are harvested  
14   from federal lands.

15           Sandy, if you wouldn't mind just  
16   describing for Commissioner Boyd and the other  
17   Commissioners just in brief the resources that  
18   could be available if the federal lands were -- or  
19   some of the impediments were lifted and fuel was  
20   more readily available from the federal lands.

21           Then also just describe to everyone the  
22   Healthy Forest Initiative.

23           MR. LAWNSDALE: Sure. I'm on a speaker  
24   phone. Can anyone hear me?

25           PRESIDING MEMBER BOYD: Yes, you can be

1 heard clearly.

2 MR. LAWNSDALE: Okay, my name is Sandy  
3 Lawnsdale. I am employed by Vulcan Power Company  
4 in Bend, Oregon. Sylvan Power is a subsidiary of  
5 Vulcan. I have a long history of forest  
6 conservation here in the Northwest as a Sierra  
7 Club leader. We are working on a project here in  
8 our neighborhood in federal forests to supply fuel  
9 for biomass energy project here.

10 As Kevin mentioned, we also have a PPA  
11 with Southern Cal Edison to supply 22 MWs of  
12 electrical energy from our biomass energy project  
13 in Central California.

14 We feel that excluding federal lands  
15 from qualifying for set payments frustrates  
16 biomass energy development in California. Federal  
17 lands constitutes 46 percent of all forest lands  
18 in California, and thus any biomass policy that  
19 seeks to increase biomass energy production by 70  
20 to 95 MWs as is in the Plan, should allow forest  
21 thinnings from federal lands to qualify under this  
22 Action Plan.

23 California biomass energy developers  
24 deserve to have a coordinated and supportive  
25 policy that recognizes the importance of improving



1 forest health through small diameter tree removal  
2 regardless of forest ownership.

3 The Healthy Forest Initiative for  
4 Wildfire Prevention and Stronger Communities was  
5 signed into law August 22, 2002, and that was  
6 filed with the Healthy Forest Restoration Act  
7 signed December 3, 2003. Those two laws called  
8 for administrative improvements to insure more  
9 timely decisions, greater efficiency, and better  
10 results from projects that reduce wildfire threats  
11 and restore forest and range land health.

12 These improvements will help reduce  
13 threats to community safety while better  
14 protecting wildlife and eco systems as well as  
15 improve water and air quality.

16 Projects arising from these forest  
17 restoration activities on federal land still must  
18 meet all federal environmental rules and  
19 regulations, and they must comply with state law.  
20 Congress found in Section 201 of the Healthy  
21 Forest Restoration Act that there is an abundant  
22 supply of forest biomass needing removal from  
23 California's federal forests in order to reduce  
24 catastrophic wildfire threats and improve forest  
25 health.

1           There are currently few markets for  
2   these extraordinary volumes of biomass material  
3   and facilitating this forest biomass removal for  
4   biomass energy creation accomplishes many of the  
5   goals that the State of California sought in the  
6   RPS.

7           We urge the Energy Commission to  
8   consider allowing biomass derived from federal  
9   lands to qualify for set payments under the  
10  California RPS.

11          That is really I had prepared. If there  
12  are more questions, I can answer them.

13          MR. MCSPADDEN: Thanks, Sandy. I just  
14  wanted to expand on what you stated and just to be  
15  more clear on what the issue is, is that currently  
16  under the RPS eligibility guidebook, there is a  
17  requirement that wood and wood waste be harvested  
18  pursuant to an approved forest plan prepared in  
19  accordance with the Subordinate Jelly Forest  
20  Practice Act, which basically limits the fuel to  
21  come from state lands.

22          We have had some conversations with the  
23  Commission staff, and they indicated that there is  
24  an intent to amend this to not make this so  
25  restrictive, but to allow for wood and wood waste

1     that is coming from federal lands to also qualify  
2     for the RPS.

3             Currently they don't, but we understand  
4     from staff that there might be some amendment to  
5     the RPS Eligibility Guidebook to allow for this to  
6     happen.

7             Beyond that, in our conversations with  
8     staff, we understand that in any event, wood and  
9     wood waste that is coming from federal land would  
10    not qualify for the set payments, and that is the  
11    interpretation coming from the Public Resources  
12    Code Section 25743. It is our intent to seek some  
13    sort of Legislative fix, you know, as well to this  
14    problem.

15            What we are recommending as far as the  
16    Bioenergy Action Plan is -- and we do plan on  
17    submitting written comments as well to follow up  
18    with our oral comments today, but what we would  
19    like for the Bio Action Energy Plan is to  
20    recognize that potential biomass fuel could be  
21    made available from federal lands under the  
22    pursuant to the Healthy Forest Initiative. It  
23    should be allowed for purposes of RPS and for  
24    eligibility for SEPS funds.

25            We would also like for the Bioenergy

1     Action Plan to recognize that there are certain  
2     regulatory impediments that are currently impeding  
3     the development of biomass facilities utilizing  
4     the fuel harvested from these federal lands.

5             In the recommendation section, we would  
6     like to also propose that there be an addition  
7     that the Commission make a recommendation to the  
8     Legislature that the impediments that currently  
9     exist in state law be removed, given that the  
10    federal law is consistent with California's policy  
11    as well.

12            As I mentioned, to that end we will be  
13    submitting written comments to you that will  
14    provide more detail about exactly what we are  
15    proposing and more information on the Healthy  
16    Forest Initiative and the potential resources from  
17    federal lands.

18            Thank you, Commissioner Boyd for  
19    allowing us to make this presentation today.

20            PRESIDING MEMBER BOYD:  Thank you for  
21    your input, and I assure you the Working Group  
22    will talk about this.

23            MR. MCSPADDEN:  Thank you.

24            PRESIDING MEMBER BOYD:  Mr. Wickizer of  
25    the Department of Forestry would like to --

1           MR. WICKIZER: Thank you, Commissioner  
2   Boyd. I appreciate Mr. McSpadden's comments and  
3   was unaware of one of the points he raised, but  
4   I'd like to add one other thing that is currently  
5   a limitation that under the Healthy Forest  
6   concept. In a recent trip to Southern California,  
7   it is apparent that some of the forests within  
8   California have a desire to move forward with  
9   releasing some sales. There has been some  
10   modifications in the sales program that allows  
11   longer term guarantee of supplies coming from  
12   federal lands.

13           However at the same time, that has  
14   occurred, there seems to be a reduction in the  
15   amount of dollars provided to the individual  
16   forest to prepare those sales. So, that is a  
17   direct hinderance.

18           One of the comments in our report was to  
19   work with the federal government to provide for  
20   some funding to work in that direction and  
21   increasing supplies for federal lands. That was  
22   one not specifically mentioned in here, but that  
23   is due to Mr. McSpadden's testimony, I think that  
24   should be highlighted as just in comments here.

25           Thank you.

1               PRESIDING MEMBER BOYD: Thank you. Ron  
2     Boyd. I see here you are from Jamestown, you have  
3     got a ways to go back home. So, I began to worry  
4     about you. After that, we will have Monica Wilson  
5     and then Sean Edgar.

6               MR. BOYD: Thank you, Commissioner Boyd.  
7     I did come a long way. I appreciate all of the  
8     comments that I have heard today. What is a guy  
9     from Jamestown that operates a waste water plant  
10    doing here before the Commission?

11              We have a project that we have been  
12    working on for the past eight years using hybrid  
13    poplars as a dedicated biomass energy crop. We  
14    did apply for funding under the PIER Program. We  
15    were not funded. I was happy to see, however,  
16    that in the priorities biomass was included.

17              We do see, however, that there may be  
18    some obstacles to implementing that, based on  
19    staff level at the CEC. I did have a conversation  
20    at one point where we were seeking funding for our  
21    project where a staff member said that dedicated  
22    biomass crops should not be funded seeing that  
23    there is so much biomass in the forests that could  
24    be utilized.

25              The comments earlier suggested just what

1 I said at that time, that you can't afford to get  
2 it. There are many other obstacles that impede  
3 getting that biomass out. There is a lack of  
4 willingness on the part of many folks to invest in  
5 projects, thinning projects, because of the  
6 uncertainty.

7 They may have an award for thinning.  
8 That gets challenged. That deal is off, and  
9 people get laid off, and it is just not a stable  
10 venture sometimes.

11 I wanted to also address just briefly,  
12 it is unfortunate that the State Board  
13 representative has left. A lot of things that are  
14 being regulatory driven are going to increase  
15 costs, they are going to increase power usage.

16 I can remember reading a white paper  
17 that was circulated I think last summer suggesting  
18 they increased the power to go to tertiary  
19 treatment for waste water. Actually we had been  
20 looking at that. The power requirements would  
21 increase by a factor of five at current levels.  
22 By the time we would build on a new facility, it  
23 may increase by a factor of seven.

24 We serve a very small population, about  
25 3,000 people to go to a tertiary level of

1 treatment is estimated \$8 million. That is a very  
2 recent study that my Board hasn't even seen.  
3 Maybe we will see it Monday.

4 How a population that small is supposed  
5 to meet a requirement is beyond me, but one thing  
6 we are trying to do is take a look at using waste  
7 water as a source of irrigation for the dedicated  
8 biomass crop. We do think it is feasible. We  
9 heard earlier from the gentleman from the UC  
10 system saying if you look at the total public  
11 benefit, it does appear reasonable.

12 We have a real world operation, not a  
13 model, that can be looked at. It just needs to be  
14 some funding put towards it to finish the project.

15 I thank you. I'll leave the comments  
16 very brief, and I know you have a lot of other  
17 people here to listen, and I just thank you very  
18 much for the opportunity.

19 PRESIDING MEMBER BOYD: Thank you. Will  
20 you be submitting something in writing about this?

21 MR. BOYD: Yes, I will.

22 PRESIDING MEMBER BOYD: Thank you.

23 MR. BOYD: Thank you.

24 PRESIDING MEMBER BOYD: Monica Wilson.

25 It appears that we have lost another. Sean Edgar



1 followed by Gina Grey and Russell Teall.

2 MR. EDGAR: Commissioners and staff,  
3 thank you for staying open late. I'm Sean Edgar,  
4 I'm the Executive Director of the Clean Fleets  
5 Coalition based here in Sacramento, a family  
6 operated haulers and recyclers of solid waste  
7 throughout the state.

8 Having been in this room a lot of hours  
9 during the IEPR process, I'll try and keep my  
10 comments brief, and I would actually like to coin  
11 a new acronym, and I guess this would be the  
12 Biomass Interagency BOWIG is what I come up with.  
13 Based upon my three year olds comment just a few  
14 weeks back that daddy you are missing hair.  
15 Actually Luke and I were outside exchanging barber  
16 phone numbers, so my next outfit may be a wig or I  
17 may take Luke up on his barbershop option to me.

18 I wanted to help out a little or I  
19 wanted you to kind of help our folks with our  
20 critical mission that we provide in terms of  
21 public sanitation to millions of Californians.  
22 Our initial reaction to the report is, wow, your  
23 consultant did a great job.

24 Doing some consulting work myself, I'm  
25 often assured that consultant is a four-letter

1 word on occasion, so I was very pleased to see  
2 some good results. Particularly, I enjoyed Slide  
3 No. 6 where the collection transportation  
4 infrastructure of which our members are a part was  
5 strategically placed standing on its head before  
6 all of the other, so that may explain the bald  
7 spot as well, but big recognition, we have an  
8 existing infrastructure out there.

9 I'll just rattle a few fact points to  
10 you. I know Mr. Berton with the Waste Board has  
11 done a great job of framing the issue as it  
12 relates to CAL EPA agencies, but the public out  
13 here in California and businesses throw away  
14 somewhere around 70 million tons a year of stuff  
15 goes out. Folks roll it out to their curb or they  
16 put it in the bin, then they forget about it.

17 Our folks come back and they do magic.  
18 They pick that stuff up and they take it somewhere  
19 in the neighborhood of 200 plus MRFS, material  
20 recovery facilities. Some of that 40 million tons  
21 plus or minus ends up about in 175 landfills in  
22 this state. We do that all with about 13,000  
23 collection vehicles which are cleaner burning  
24 everyday thanks to our friends over at the Air  
25 Resources Board.

1           I want to just zero in and provide what  
2   I will call a couple of can do comments because we  
3   are here to offer creative suggestions. I know I  
4   have heard some can't do, and I want to give you  
5   some can do. Specifically on Page 34 of the  
6   report, the consultant recognizes that a key  
7   objective of the Action Plan should be to increase  
8   diversion and use of suitable biomass materials  
9   from municipal waste streams to boost fuel  
10   supplies.

11           That is an absolutely because what we  
12   see is this is a pro landfill diversion, what we  
13   will call MRF first effort with regard to material  
14   recovery facilities. We are looking at post-  
15   recycle materials. Nobody in our industry that is  
16   seriously looking at these types of technologies,  
17   which are getting cleaner and more modular all the  
18   time, which by the way we are referring to as  
19   green boxes, not black boxes.

20           Nobody in our industry is looking at  
21   backing up a garbage truck and dumping it into  
22   some sort of box and Willy Wonka Factory and all  
23   of the sudden out comes a magic product. What we  
24   are looking at cleaner, greener, more modular  
25   technologies that we can take urban derived green

1 waste, wood waste, and convert that into fuels and  
2 energy in the communities that we serve.

3 With that being said, I'll just  
4 highlight a few other facts before I sit down and  
5 shut up. One of which is the Integrated Waste  
6 Management Board and their waste characterization  
7 study back in 2003, noted that of that 40 million  
8 tons that still goes into California landfills,  
9 approximately 22 percent is construction  
10 demolition debris, and that waste stream as you  
11 may be familiar, knocking down buildings and  
12 building new buildings. We find that typically 30  
13 to 40 percent of that waste stream is wood  
14 product.

15 If you just do the math there, that is  
16 somewhere around 3 and 1/2 million tons per year  
17 of just wood that we could probably put a little  
18 bit extra hands on, separate it, and get that into  
19 some sort of a greenbox.

20 My friends over at the NESA Farmers  
21 League in the Central Valley looking at Senate  
22 Bill 704 or 705, I forget the ag burning  
23 prohibition, have a number out there roughly  
24 900,000 tons per year of agricultural residual  
25 that will need a find a home sometime in the near

1 future.

2 In conclusion, what we are here to say,  
3 what we can do is we can support where your staff  
4 is going and where your consultant is going on the  
5 two billion gallons of biofuel consumption, great  
6 thing, still a lot of details, how does it roll  
7 out flexibility for refiners and so forth and so  
8 forth.

9 A key item in there that we can support,  
10 we love going RPS beyond 2020. That provides  
11 opportunities for us. We love keeping the current  
12 biomass energy facilities healthy and hopefully  
13 rebuilding that industry because we are the fuel  
14 suppliers to that industry.

15 Particularly on your consultant  
16 recommendation to the Air Resources Board, we  
17 would just liked on Recommendation No. 2 about  
18 comprehensive study to look at different varying  
19 levels of ethanol blended gasoline. We would just  
20 like to suggest that perhaps might make sense  
21 based on three billion gallons worth of B diesel  
22 consumption here in California that we might add  
23 diesel and diesel blends to that study as well.

24 With regard to stable funding  
25 mechanisms, we know some of those things are going

1 to be problematic. The landfill tip surcharge. I  
2 don't think the landfills guys are here, so they  
3 will tell you how they might not like that. My  
4 guys don't operate landfills, so I don't have any  
5 comments on that today.

6 What I do know is that the Biomass  
7 Energy Alliance -- I'll close up with one idea.  
8 As we go out bifurcate the waste stream of the  
9 stuff that you put out at the curb, what we do  
10 know is that we are not going to get real warm and  
11 fuzzy on this garbage bill tip fee, or garbage  
12 bill surcharge concept that the biomass industry  
13 came up with. We are not convinced today that (A)  
14 that is the right pocket, and (B) we are going to  
15 ask them to stand in line because you may be aware  
16 that right now we are trying to up that bill a  
17 little bit to pay for air views, regulation for  
18 cleaner garbage trucks.

19 We've got the E waste situation that  
20 took us five years to get a bill through to  
21 Legislature to start some funding there. U-waste,  
22 just last month the energizer bunny was outlawed  
23 from disposal in your garbage can. The public  
24 that generates one pound per person per year in  
25 California, we are supposed to figure how to get

1     that out of the garbage can and somewhere for  
2     recycling. We don't quite know where yet.

3             We know it is going to be difficult. We  
4     know you are going to have critics. You have a  
5     lot of friends within our sphere of influence. I  
6     will leave you with a little thought too. In a  
7     previous life I was a M85 retailer, so I have a  
8     little bit of experience in trying to move that  
9     unique fuel out in the marketplace. I can assure  
10    that in 1998, one person three units in Los  
11    Angeles market zone, I moved three million gallons  
12    of gasoline that year, and I moved about 200  
13    gallons of M85. I have a little bit of  
14    information on how not to do it. I am sure folks  
15    in this room do, so we are looking forward to  
16    developing those green boxes and stay away from  
17    the black boxes. Thank you.

18            PRESIDING MEMBER BOYD: Thank you. I  
19    lived through M85. Mr. Ward is hiding over here,  
20    Peter is a real veteran. Gina Grey, who also  
21    might be a veteran of M85. Western States  
22    Petroleum Association.

23            MS. GREY: Thank you, Commissioner Boyd,  
24    members of the Working Group, and staff.  
25    Unfortunately, our president, Joe Sporano was

1 hoping to be here today. He intended to give our  
2 comments, but unfortunately, he was called away to  
3 a funeral, but he has asked me to present the  
4 comments today.

5 As Commissioner Boyd said, my name is  
6 Gina Grey. I am WSPA's Director of Policy and  
7 Fuels. For those who may not be familiar with who  
8 WSPA is, Western States Petroleum Association, we  
9 represent energy companies that explore for,  
10 produce, or find transport and market petroleum  
11 and petroleum products, natural gas, and other  
12 energy products.

13 I heard today that we were referred to  
14 as "big oil". I am sure there are a lot of other  
15 names that we are referred to as, but that is  
16 exactly what we do. We are actually energy  
17 companies. I've tried to really reduce this  
18 testimony as much as possible. Unfortunately, I  
19 don't think there are too many "me too"  
20 statements, but I have excluded as much as I  
21 could. So, please bear with me.

22 Let me state at the outset that our  
23 organization is not opposed to bioenergy. That is  
24 a statement I need to make right up front. We do  
25 applaud the efforts to formulate a consistent



1 integrated and coordinated state strategy for  
2 California.

3 We agree there is a potential for  
4 recovering and using biomass resources in the  
5 state. However, we disagree with some of the  
6 methods the state proposes to tap into those  
7 resources.

8 Now I heard the term coined earlier  
9 today by CalSTART the renewable roadway, and some  
10 of you who may have been involved in a lot of the  
11 IEPR and Climate Action Team activities recently  
12 heard the WSPA term which is "petroleum plus". I  
13 won't go into all of the details, that is part of  
14 the testimony I've excluded, but literally if any  
15 of you are interested in what petroleum plus  
16 involves, just talk to me after the session.

17 In order for this state to secure the  
18 energy supplies needed to keep our economy growing  
19 and strong, government policies must create a  
20 level playing field for U.S. companies to insure  
21 international supply competitiveness.

22 The imposition of new controls, new or  
23 expanded mandates, allocation schemes, new taxes  
24 on industry, or other obstacles would be  
25 counterproductive to this goal.

1           I'd like to now try and center on the  
2   specific feedback on the Navigant report. As you  
3   probably would guess, most of our comments do  
4   relate to the biofuels part of the bioenergy  
5   discussion.

6           First what we do support. We support  
7   the sections in the report dealing with additional  
8   bioenergy research development and demonstration  
9   projects. WSPA believes that there are issues  
10   that need to be addressed with biofuels before  
11   there is widespread implementation. Unless these  
12   issues are addressed, I think you heard many of  
13   them earlier today, there is a potential to  
14   introduce problems into the distribution system,  
15   including fuel supply reliability or cause  
16   problems for consumers.

17           We also believe a multi-media evaluation  
18   should take place similar to what was originally  
19   performed on ethanol.

20           We also support government engaging in  
21   an outreach program to educate the public on the  
22   potential benefits and opportunities of this  
23   resources. The outreach must be complete and  
24   balanced, including the possible negative  
25   consequences of any fuel. For example, biodiesel

1 and ethanol have very low sulphur and other  
2 favorable properties, but they also have reduced  
3 energy content, which I don't think I heard anyone  
4 talk about today, and resulting lower miles per  
5 gallon for the consumer.

6 The public outreach might also reference  
7 any air quality impacts, issues with qualities,  
8 stability, and standards, potential operability  
9 and material capability problems, and vehicle  
10 warranty issues.

11 On another important issue, the federal  
12 government is in the process right now of  
13 implementing a RFS, which we heard about today.  
14 It involved a lot of multi-stakeholder input and  
15 will result in an increase of ethanol use to 7.5  
16 billion gallons a year by 2012.

17 The intent of Congress was to grow  
18 renewable fuel use in the nation in the most  
19 economically feasible way. Our industry is in the  
20 process of preparing to implement this RFS and its  
21 multi-year increasing renewable fuel standards.

22 The benefit of the federal RFS is the  
23 needed flexibility it provides to enable renewable  
24 fuels to be initially utilized in the areas where  
25 it makes sense while the program ramps up.

1           The fact that states may not adopt their  
2   own RFS or biofuels programs eliminates for us  
3   this important flexibility. We therefore oppose  
4   the consultants first recommended Tier 1 action  
5   for 2006, which establishes a RFS for California  
6   's transportation sector. Quite simply, our  
7   industry opposes state mandates requiring certain  
8   percentages of biodiesel or ethanol, or as coined  
9   in the report, the consumption of certain  
10  quantities.

11           We aren't aware of anyway to  
12  successfully mandate consumption, except possibly  
13  through rationing and limiting consumer choice.  
14  We are not too sure if the word consumption is  
15  actually the correct word in this case.

16           On a positive note, WSPA is pleased to  
17  see in the report mention of advanced renewable  
18  diesel fuels that produce, according to the  
19  report, greater volumes and higher quality  
20  biodiesel.

21           Our industry wants to insure that any  
22  legislation or other efforts that move forward  
23  include a broad definition of biodiesel, such that  
24  includes these advanced renewable diesel fuels  
25  that are based on a broad range of feedstocks.

1 Obviously, you know, our industry is quite  
2 involved in TTL, Fischer-Tropsch, etc., and I  
3 think a lot of the comments earlier relative to  
4 broadening and alternative fuels, etc. etc. we  
5 would want to make sure that Fisher-Tropsch  
6 processes were also included in those types of  
7 definitions.

8 For E-85, the consultant appears to have  
9 concluded that because there is a relatively  
10 significant number of existing FFE's in the  
11 California market, FFE's will continue to come  
12 into the market at a rapid rate, further  
13 concluding that there is a need for E-85 at  
14 retail.

15 Other than General Motors and perhaps  
16 limited interest from a few other manufacturers,  
17 there is a real question about the future market  
18 penetration of these vehicles beyond the current  
19 one to two percent based on vehicle manufacturer  
20 reports.

21 The Federal Energy Bill includes R & D  
22 dollars for cellulosic ethanol. WSPA believes the  
23 state should support this kind of research which  
24 appears to have greater benefits from an energy  
25 cycle perspective than corn-based ethanol. It

1 also involves the creation of value-added products  
2 from existing California unutilized or waste  
3 products.

4 The petroleum industry has used ethanol  
5 for many years and for many reasons. These  
6 include use as an octane enhancer, a volume  
7 extender, and as a replacement for MTBE. ARB, the  
8 oil industry, and the auto industry have been  
9 investigating whether low level blends of ethanol,  
10 such as those we see in California, are an air  
11 quality problem due to increased permeation of VOC  
12 from vehicle soft components.

13 Our industry is working with ARB on an  
14 update to the predictive model, which was  
15 mentioned today, the use in blending of gasoline  
16 to determine how this permeation affect can be  
17 incorporated.

18 There are several references in the  
19 report to a supposition that due to the RFS and  
20 the waved federal oxygenate mandate, that ethanol  
21 use in California will decrease. This seems to be  
22 a questionable conclusion since the CEC's own  
23 November 2005 analysis, which I believe is called  
24 Ethanol Market for California, states that our  
25 industry has shown no inclination to dramatically

1 vary its ethanol use.

2           Since we are a trade association, we  
3 have no direct knowledge about any of our  
4 individual company plans for the renewable market,  
5 but we believe the CEC's analysis was based on  
6 input from our industry and is reasonable.

7           Here are a few final thoughts. The  
8 question today seems to be what can California  
9 agencies or state government do. WSPA's response  
10 is that you should insure that artificial barriers  
11 to implementation are addressed.

12           This includes simplifying permitting,  
13 assisting with infrastructure issues such as you  
14 have with our industry, setting standards and test  
15 methods for new fuels, revising inconsistent  
16 regulations, and working out definitional issues  
17 so viable fuels aren't excluded.

18           What government should not do is propose  
19 grand schemes for increasing a certain segment of  
20 the market, such as biofuels and then recommend  
21 that the funding for those enterprises should be  
22 obtained from the existing business base in the  
23 state.

24           WSPA opposes the consultant's proposal  
25 to institute excise taxes on non-renewable motor

1     fuels. We also oppose the proposal to institute  
2     carbon taxes, which I am sure you have heard about  
3     in the greenhouse gas context. We would, however,  
4     need to review carefully the proposed financial  
5     incentives and mechanisms in order to weigh in  
6     with opinions on those ideas.

7             Page 23 of the Navigant report discusses  
8     policy and regulatory impediments and leads with  
9     an outline of the bioenergy industry. It states  
10    that each segment of the industry has competing  
11    interests and faces differing regulations to make  
12    it difficult for the industry to address common  
13    issues or speak in a uniform manner on regulatory  
14    issues.

15            This competition which exists in spades  
16    in the oil industry I can assure you is healthy in  
17    a normal functioning market system. Government  
18    should not view it as something that needs to be  
19    fixed.

20            Finally, on January 25 this year,  
21    Navigant's presentation to the Executive Board of  
22    the California Biomass Collaborative included  
23    preliminary prioritization criteria for the action  
24    plan report or work.

25            The presentation indicates "How can the



1 state support technology innovation and  
2 development without picking winners and losers?"  
3 We hope this criterion is still very much a part  
4 of the Bioenergy Action Plan that the state  
5 decides to adopt.

6 That concludes our comments. I am happy  
7 to answer any questions. I am sorry if that was  
8 too long.

9 PRESIDING MEMBER BOYD: Not bad, thank  
10 you. No questions? Thank you very much.

11 MS. GREY: Thank you.

12 PRESIDING MEMBER BOYD: Russell Teall,  
13 then Melissa Hunter, then Monica Wilson, who did  
14 reappear mysteriously.

15 MR. TEALL: Thank you for your patience  
16 and endurance. This has been a long day, and I am  
17 glad to see that the two of you are here and the  
18 rest of the staff. This actually has been a very  
19 long project, you know, putting this together. I  
20 think the results are as everyone as described,  
21 terrific, wonderful, great. It is commendable.

22 My name is Russell Teall. I am the  
23 President and Founder of Biodiesel Industries. We  
24 build, own, and operate the largest network of  
25 biodiesel plants in the world. We've got projects

1 in Colorado, Texas, California with the Navy down  
2 at Port (Indiscernible). The project in Detroit  
3 was referenced earlier that we are doing with  
4 Daimler Chrysler, Bosch, Delphi, and the U. S.  
5 Army, as well projects in Australia, the  
6 Philippines, and India.

7 I speak with some experience in terms of  
8 policy setting because in a lot of the foreign  
9 countries, we've gone through an extensive process  
10 of reviewing what can be done to encourage biofuel  
11 use there. In India, in particular, they have put  
12 together an interagency task force appointed by  
13 the Parliament that is concluding three years  
14 worth of work. They are presenting their results  
15 this month. You are on track with India except  
16 you started last August. So, you are making quite  
17 a bit better progress.

18 The parallels are pretty stunning. It  
19 really boils down to three elements, which are the  
20 mandates, the incentives, and the removal of  
21 barriers. I think your report successfully  
22 addresses all of those issues, it provides some  
23 balance, and if there is the political will to  
24 actually implement the recommendations there, I  
25 think there will be a very successful and vibrant

1 biofuels and biodiesel industry in California.

2 Just a couple of comments. There is a  
3 bill that has been introduced in the Senate,  
4 Senate Bill 1675, on February 24 that provides for  
5 biodiesel mandates, 2 percent by the year 2008, 5  
6 percent by 2010.

7 There is also a report that will be  
8 released on March 13 from the Bay Area Air Quality  
9 Management District that was commissioned by them  
10 to look at biodiesel production in the Bay Area  
11 and strategies for mitigating and Nox, and I will  
12 make sure that Dean gets a copy of that.

13 Basically, it looks at different  
14 feedstocks that can be used, different additives,  
15 different mechanical filters, and we are able to  
16 show through the combustion analysis laboratory at  
17 UC Berkeley a 13 to 15 percent reduction in Nox  
18 using some additives that are available with B100,  
19 both with a feedstock that is usually  
20 disadvantageous, which is the virgin soy bean oil,  
21 as well as yellow grease. So, there are some very  
22 promising results.

23 The work that was referenced at the  
24 conference, the National Biodiesel Ward Conference  
25 was actually our fuel that we developed at the

1 U.S. Navy for use by C Cert in doing that test for  
2 the vehicles from Camp Pendleton. I will  
3 personally sit on Bruce Holden and makes sure he  
4 gets those results to you, if he hasn't gotten  
5 them to you already.

6 The other part of the Bay Area Air  
7 Quality Management District study was to look at  
8 the available resources. This really dovetailed  
9 off some work that we did for the U.S. Department  
10 of Energy back in 1999 on a statewide basis, and  
11 it was looking at the available resources in  
12 California, both from agricultural products,  
13 agricultural waste products, and used cooking oil.

14 There is easily several hundred million  
15 gallons of feedstocks available right now and  
16 potential if there is a demand for the product to  
17 grow additional feedstocks that were alluded to by  
18 the gentleman from UC Davis. We happen to be  
19 working with Cal State University in Fresno on  
20 canola for bio-remediation purposes. There is a  
21 lot of selenium enriched soil out there that has  
22 been taken off the market without any water rights  
23 that can be used for growing these energy crops.  
24 It actually takes up the selenium, which is a  
25 valuable nutrient for cattle feed.

1           The other project that we are working on  
2   is with a plan called (Indiscernible) which has  
3   over a 50 percent oil content that we are growing  
4   in greenhouse in Santa Barbara and planting out on  
5   some test crops in cooperation with the city and  
6   county that has quite a bit of promise.

7           The ASDM standards, having been through  
8   that process, it was seven or eight years to go  
9   through and build a consensus standard, and it is  
10  an arduous process, but it is a very worthwhile  
11  process. It is a consensus-based organization,  
12  and so it means not only are their standards set,  
13  but they are acceptable to the fuel producer  
14  industry, the OEM's, the petroleum industry so  
15  that not only is there a standard, but there is a  
16  protocol for performing the test to achieve those  
17  standards in a repeatable manner so you not only  
18  have a test, but you have got a methodology for  
19  getting consistent test results.

20           It is a slow process, and with our  
21  colleagues in the next energy venture in Detroit,  
22  there is some frustration at the speed with which  
23  that process works. I share their concern. We  
24  are working with them designing different types of  
25  boutique biodiesel with different characteristics

1     because when they build an engine that is for use  
2     not only in the United States but throughout the  
3     world, so they want to look at biodiesel from a  
4     whole number of sources. When they produce a  
5     vehicle, it will be absolutely compatible with  
6     anything that they are likely to encounter.

7             I would recommend that this task force  
8     and the state be involved in the ASTM process,  
9     learn from it, participate in it, but feel free to  
10    adopt more aggressive policies and standards and  
11    lead the way.

12            There are really two issues when you are  
13    talking about standards. One is the standard  
14    itself, and the other is quality control. As an  
15    industry, we are experiencing a lot of rapid  
16    growth, and there are a lot of new entrance into  
17    the marketplace, and one of the major concerns  
18    from the OEM's from the manufacturers is the  
19    ability to meet the existing standards.

20            The Department of Weights and Measures  
21    has a task there to insure that any standards that  
22    do exist are actually being met. The ASTM  
23    standard now, there is one for B100 as a blend  
24    stock. There is a standard for diesel fuel, but  
25    there is no standard for the combined fuels so

1     that the Department of Agriculture can go in and  
2     say is this really B10?

3             The development of a blended standard as  
4     Tom from Bosch alluded to and from Daimler  
5     Chrysler is very important and will help with the  
6     implementation of the fuel.

7             I guess in closing, I would like to say  
8     that we are very supportive of this report. We  
9     think that it covers a lot of ground and covers it  
10    very well. When it is presented to the Governor,  
11    it should be presented with some biodiesel for his  
12    Humvees.

13            Thank you.

14            PRESIDING MEMBER BOYD: I'll think we  
15    will walk it over.

16            MR. TEALL: We will donate it by the  
17    way.

18            PRESIDING MEMBER BOYD: Thank you very  
19    much. Melissa Hunter.

20            MS. HUNTER: Thank you, Mr. Chairman and  
21    members for the opportunity to comment today. My  
22    name is Melissa Hunter, and I represent the Kings  
23    River Conservation District in Fresno.

24            We are supportive of the Bioenergy  
25    Action Plan, but felt that one market barrier was

1 missing. I just want to give you brief background  
2 about our part in this.

3 We are developing a community choice  
4 aggregation program in the Central San Joaquin  
5 Valley. It is comprised of 13 municipalities in  
6 Fresno, Kings, and Tulare Counties. We are  
7 looking at the renewable portfolio standard and  
8 how we can get 20 percent by 2010.

9 We are also participating in a regional  
10 business alliance called the Regional Jobs  
11 Initiative. It is primarily in Fresno, but it is  
12 part of the larger California partnership for the  
13 San Joaquin Valley effort that the Governor has  
14 asked for basically from Bakersfield to Stockton.  
15 We are looking at how we can develop a clean  
16 energy industry sector in the San Joaquin Valley  
17 and spur on more economic development.

18 We are also faced with a terrible air  
19 quality problem in the Fresno area, and we have  
20 water quality challenges, so we really are excited  
21 about biopower and utilizing our vast amounts of  
22 agriculture residues, and specifically dairy  
23 waste. I think we have the highest concentration  
24 of dairies in the state.

25 We are hoping that we can utilize these



1 resources to generate power for a community and  
2 its more economic development for the region.

3 In talking with the dairy industry and  
4 some engineering firms, what we are hearing is  
5 that there is a huge barrier as far as being able  
6 to connect to the grid. We are hearing that they  
7 can generate more power that can be used on site,  
8 and yet they are not being paid for that, so there  
9 is no incentive to go to that work.

10 Considering how much power we are  
11 needing in that area, I am not sure what can be  
12 done about it, but in reading the report, I didn't  
13 see this market barrier addressed or actions  
14 recommended, and that seems to be what is holding  
15 back a lot of the dairy projects in the Central  
16 Valley. We would like to see that being added  
17 into the report.

18 If there are any questions, I will be  
19 happy to answer them.

20 PRESIDING MEMBER BOYD: Thank you. Some  
21 of us are painfully familiar with the issue you  
22 bring up, and I did believe I do recall in the  
23 context of one of our meetings we did talk about  
24 the issue as an issue that had to stay on the  
25 table. I am just sorry my compatriot from the PUC

1     isn't here because they are on the driver's seat  
2     on this. It is all part of reconstructing the  
3     energy system of the State of California and some  
4     of the consequences of the original crash, but it  
5     is a problem. We would like to see it resolved  
6     somehow or another. Thank you for bringing it to  
7     our attention again.

8             Yes, Mr. Schaffer.

9             MR. SCHAFFER: Just very quickly to  
10    reinforce Jim's comments and some from the  
11    Department of Food and Agriculture, we share and  
12    feel your pain. It has been discussed and we are  
13    surprised because as I read through, I thought it  
14    was mentioned, but we will go back and check and  
15    we will make sure.

16            UNIDENTIFIED SPEAKER: (Inaudible.)

17            MR. SCHAFFER: Okay.

18            MS. HUNTER: I saw it slightly in there,  
19    but it just seemed rather small, and very  
20    minimalized to the sense I am like is that really  
21    our issue or not. Yet, it seems to be really  
22    holding us back in our area, and the technology  
23    seems to be there. It is just a way of being able  
24    to buy the power and use it.

25            Hopefully, the seller and the buyer can

1 get connected soon.

2 PRESIDING MEMBER BOYD: It is a major  
3 problem, not just for this one small component,  
4 but it is a major problem for self-gen, co-  
5 generation, it is a major problem for some very  
6 large generators who could put electricity over  
7 the fence. I'll preclude it from doing so. It is  
8 a dilemma we are wrestling with, and yet it  
9 deserves a little more notoriety.

10 If you are confused and you are familiar  
11 with it, we will make sure --

12 MS. HUNTER: Yeah, I would just like to  
13 see it spelled out a little more because we also  
14 have a large food processing industry. We could  
15 do a lot with that as well, but it is similar  
16 issues.

17 PRESIDING MEMBER BOYD: Thank you very  
18 much.

19 MS. HUNTER: Thank you.

20 PRESIDING MEMBER BOYD: Brooke Coleman  
21 (No response.)

22 PRESIDING MEMBER BOYD: Ruth MacDougall,  
23 and I'll circle back to Brooke Coleman if she  
24 reappears. Oh -- Brooke Coleman did appear.

25 MR. COLEMAN: Do you mind if I go.

1               PRESIDING MEMBER BOYD: Go ahead, Ruth  
2     you will be next.

3               MR. COLEMAN: This is going to be short.  
4     Thank you for the opportunity to speak today. My  
5     name is Brooke Coleman. I am the Director of the  
6     Renewable Energy Action Project, National  
7     Renewable Energy Advocacy Coalition. I am sorry,  
8     I was in the hall talking.

9               I will give a very short presentation  
10    hopefully today about something I know something  
11    about. I'll try not to get into the stuff I don't  
12    know anything about because we have all had  
13    enough.

14              One of the things that I do know  
15    something about is biofuels and California needs a  
16    biofuels plan. The current California environment  
17    is not productive. We have had three plus years  
18    of ethanol use as a replacement for MTBE. There  
19    has been little in-state production. Obviously  
20    the problem here is on-going regulatory  
21    uncertainty that is chilling industrial growth.  
22    We would be in a different place if three years  
23    ago we made a volumetric commitment to ethanol.

24              You can contrast that with Minnesota  
25    which nearly tripled in-state production in three

1 plus years once they made a volumetric commitment  
2 to biofuels. Minnesota was touched on in earlier  
3 testimony, and I want to talk very quickly about  
4 what's happening in Minnesota or what's happened  
5 in Minnesota.

6 There are basically two prongs to their  
7 approach. They require statewide blending via  
8 state oxygen requirement in 1997 and implemented  
9 producer payments in the 1980's.

10 The bottom line is that today for every  
11 one dollar paid for ethanol producer payments, the  
12 state earns \$16 to \$20 in general fund dollars  
13 through state economic revenue. I talked to a  
14 high-level official. I don't want to get into an  
15 ethanol issue in California, and he said, well, we  
16 started at the Department of Ag in Minnesota -- he  
17 said, well, we started this concept as an  
18 environmental idea, but it sure is one hell of an  
19 economic development program.

20 You can see here that even though they  
21 started the producer payments in the 80's, there  
22 was really in the year 1997 when they made a  
23 volumetric commitment to low-level ethanol blends,  
24 that the in-state production increased  
25 substantially.

1           There are also lessons to be learned  
2   with regard to E-85 from the Minnesota model. The  
3   E-85 enjoys widespread support in California. The  
4   plans that I have heard lack for implementation  
5   strategy thus far. The question remains how best  
6   to promote it. Obviously the best solution  
7   incorporates all available strategies, but we  
8   would like to throw out one additional proposal  
9   that hopefully you heard it here first.

10           It is called the overflow strategy.  
11   What the heck is the overflow strategy? Well, it  
12   is basically when someone, a state, makes a  
13   commitment to low blend whatever it is, whatever  
14   works with the predictive model, whatever works  
15   with your regulations, whether it is biodiesel or  
16   ethanol. You let the low blend market overflow  
17   into the high blend market.

18           Now the advantages of doing this are  
19   that you build the industry on the backs of the  
20   industry itself. There is less burden on the  
21   state to build an E-85 infrastructure by pump and  
22   pump, and it also optimizes the cellulosic R&D  
23   dollars in California.

24           How does it do that? Well, if you look  
25   at the roster of the Renewable Fuels Association,

1     which is basically the lobbying group for ethanol  
2     producers nationwide, you will see that most of  
3     them, a large majority of them have R&D dollars  
4     for cellulosic ethanol. It is no secret why they  
5     have it. You can make a heck of a lot of money if  
6     you can crack that nut. Why not bring those  
7     dollars into the State of California?

8             It is not just a theory I hope. Here is  
9     the overflow strategy at work in Minnesota. You  
10    will notice that the blue lines are in-state  
11    Minnesota production. The sort of purple lines  
12    are consumption. Their consumption far outweigh  
13    their production just like it does here in  
14    California.

15            You will see that in 1997 over a three-  
16    year period, they very quickly increased in-state  
17    production once they made the commitment  
18    volumetrically up to the year 2000. I want you to  
19    remember that year because that also happens to be  
20    the year when Minnesota's E-85 market took off.  
21    You can see a major jump in the number of stations  
22    at year end in 2000. The total yearly volume in  
23    E-85 sales, the total monthly station average  
24    volume for E-85 is reflected on the right in the  
25    chart.

1           Minnesota just opened its 200th E-85  
2   station last week I believe. I guess the argument  
3   now is which one was the 200th? I'll have to let  
4   that go.

5           The proposed RFS is a good solution. I  
6   am proposing the overflow strategy not because I  
7   am proposing that you mandate E-6, but I'm more  
8   proposing that you make a commitment to the  
9   existing ethanol market, and you can do that in  
10   collaboration with RFS. The obvious benefits of a  
11   RFS are that it has flexible compliance with a  
12   variety of fuels. It lets the predictive model do  
13   its job. That is an important point to make here  
14   because the predictive model is a regulatory  
15   mechanism, and the predictive model insures that  
16   no blend between zero and 10 percent ethanol, for  
17   example, is allowed to increase emissions.

18           If you say you believe that ethanol  
19   blends in the low levels increase emissions, you  
20   are basically saying that the predictive model is  
21   missing something. Permeation is on the list of  
22   things that the predictive model could be missing.  
23   However, a predictive model is going to deal with  
24   permeation in the next six to eight months, maybe  
25   a year.



1           That is going to be in the model, and  
2 permeation isn't going to be a problem at the  
3 tailpipe because it is going to be mitigated. The  
4 one thing I do have to say about the RFS is the  
5 two billion gallons by 2020 might be a bit too  
6 conservative.

7           We have a billion gallons already we  
8 could commit to tomorrow via executive order and  
9 an E-10 if viable through the process of the  
10 predictive model would create 1.5 billion gallons.  
11 That is just ethanol, and that could be done in a  
12 matter of months, not years.

13           Switching gears here, only a couple of  
14 more slides. We recently completed an ethanol  
15 report. We were involved with an ethanol blending  
16 program in Wisconsin, a very controversial  
17 proposal there to require E-10. You might have  
18 heard of the E-10 controversy, but what the  
19 legislators there noticed that many states  
20 switched from MTBE to ethanol as a result of  
21 federal rules over the last several years.

22           They wanted to know what the air quality  
23 monitoring data said, so, we said all right, we  
24 will go look at it. The basic point here is that  
25 air quality modeling as opposed monitoring is

1 useful, but it shouldn't be regarded as the only  
2 source of information.

3 This is the south coast in California  
4 for all three major ozone requirements over the  
5 last couple of years. You see that there is a  
6 drop in ozone exceedence days when MTBE was banned  
7 and E-6 went into use.

8 We are not proposing that ethanol is the  
9 only reason for this, but when folks said that we  
10 are going to have a problem with low level ethanol  
11 three or four years ago and then five years in  
12 this state, they didn't say we were going to have  
13 a hidden low level problem with ethanol. They  
14 said we are going to have increased exceedence  
15 days. There is a lot going on in this graph, all  
16 sorts of nonlinear relationships between VOCs and  
17 Nox and what have you.

18 This is a fact that this is the air  
19 quality profile in California since we got rid of  
20 MTBE and started using E-6. We also looked at  
21 Connecticut and New York, two states that easily  
22 could be described as jittery about switching to  
23 ethanol and not pleased with the federal  
24 government for making them do it.

25 They went to E-10, both on January 1,

1 2004. You will notice a lot of the nerves were  
2 calmed by that following year when both of them  
3 had one of the best ozone years in recorded  
4 history. Now they were helped by a slightly  
5 cooler than normal summer, and ozone exceedences  
6 rebounded somewhat, but the average between those  
7 two years is significantly lower than the average  
8 of any of the combination of the years leading up  
9 to that switch.

10 The last slide, immediate actions.  
11 these are high priority actions. As we have  
12 talked about, we've written several letters that  
13 say that California needs to capture the existing  
14 ethanol market. We simply can't afford to go  
15 backwards. There is an opportunity here to take a  
16 billion gallons and say, all right, we are not  
17 going to use less than a billion gallons. We  
18 don't care how you use it. You are going to have  
19 to use it lawfully, which means it is going to  
20 have to be certified with a predictive model. We  
21 are going to move forward from here. That will  
22 seed the financing for that.

23 We also need to capture low blend  
24 biodiesel markets because there is no significant  
25 air quality concerns at 2 to 5. There is a low

1 sulphur lubricity problem that we need to solve  
2 with biodiesel and not another petroleum fuel.  
3 Perhaps the answer here is to use these two  
4 markets to catalize overflow, the overflow  
5 concept.

6 Last but not least, I think the state  
7 should instruct ARB to optimize fuels regulations  
8 for non-petroleum fuel blending. This is pretty  
9 controversial, but I don't think it should be.  
10 Number one, we have done this before. California  
11 told ARB in 2000 that the over-arching goal with  
12 the predictive model was to ban MTBE and promote  
13 flexibility to use non-oxygenated fuel. They did  
14 it, and that would be in line -- in order for them  
15 to allow for the use of non-petroleum fuels or  
16 promote the use of non-petroleum fuels in a  
17 predictive model is viable.

18 The other reason it makes sense is that  
19 ethanol is not a dirty fuel. It's got a RVP of 2  
20 and the cap end state is 7. It has got low  
21 sulphur. It's got low aromatics. It is got  
22 pretty low toxicity. The problem isn't the fuel.  
23 The problem is mixing those two fuels together.  
24 If that is the problem, the next question is can  
25 we adjust the mixture to make sure that the

1     benefits of ethanol are optimized. I encourage  
2     the state to do that.

3             If the response is why should we use the  
4     predictive model to promote a lesser fuel, that is  
5     not a straightforward response because ethanol is  
6     not a lesser fuel. That is why most of the state  
7     is so for E-85.

8             Finally, before I get off this podium,  
9     inevitably at every single one of these things,  
10    someone stands up here and adds some fuel to the  
11    fire on misinformation about low blend ethanol.  
12    Today's was that end mog emissions go up and toxic  
13    emissions go up. There are all sorts of numbers  
14    that were cited. The report that was cited was E-  
15    67. The problem with citing that report for  
16    toxics is that the four fuels that were tested for  
17    toxicity in that report, would not in a million  
18    years meet the certification requirements in  
19    California because their distillation temperatures  
20    were way out of whack with what this state allows.

21            In the report, the next question then is  
22    well, if you brought down the distillation  
23    temperatures, were the conclusions that were  
24    talked about today about end mog and toxicity, be  
25    similar. The short answer is we don't know, but

1 the report itself addresses this issue. It says,  
2 and I quote, "The results of this study do not  
3 permit any conclusions as to what effects ethanol  
4 might have had on end mog or toxic emissions for  
5 fuels having low or mid point T-90 distillation  
6 temperature levels."

7 That translated basically says that this  
8 report is no indication whatsoever for states that  
9 have lower T-90 level requirements like  
10 California. If we are going to move this debate  
11 forward, we need to move it forward with non-  
12 selective use of data, and we need to move it  
13 forward honestly.

14 Thank you very much.

15 PRESIDING MEMBER BOYD: Thank you. Any  
16 questions?

17 (No response.)

18 PRESIDING MEMBER BOYD: Ruth MacDougall  
19 and then Monica Wilson. I think I jumped over  
20 you, so you will be next. That makes twice you  
21 got jumped over.

22 MS. MACDOUGALL: Thank you, Mr.  
23 Chairman, for accepting my comments. I really  
24 appreciate the Bioenergy Interagency Action Plan.

25 PRESIDING MEMBER BOYD: I can't say it

1     either.

2                 MS. MACDOUGALL:  Yeah, especially after  
3     eight hours of this.  I'm Ruth MacDougall, and I  
4     manage SMUD's biomass program.  SMUD is actively  
5     involved in supporting biomass on two fronts.

6                 First we purchase power from biomass to  
7     meet our RPS goal of 23 percent by 2011.  We are  
8     also promoting development of biomass projects to  
9     convert local problem waste and residues to  
10    energy.

11                Through that, I've become all too  
12    familiar with some of the challenges facing  
13    biomass in California.  I'm really grateful that  
14    you are working towards an integrated policy that  
15    will help projects happen.

16                I will submit comments in writing.  I  
17    just wanted to make a couple of key comments here.  
18    One is that I want to stick up for biopower.  I  
19    think there is a lot of attention towards fuels,  
20    and I am grateful for the enthusiasm and energy on  
21    that.  I don't want to lose sight of the biopower  
22    industry and the advancements that we need to make  
23    in biopower as well.

24                I am really pleased that there is a  
25    recommendation to revise the definition of

1 conversion technologies for biopower and I think  
2 it is crucial to adopting advanced technologies  
3 that will increase the efficiency, technologies  
4 such as gasification and pyrolysis have been  
5 demonstrated and aerobic digestion is widely used  
6 in Europe and other countries because of strong  
7 economic support and policy support.

8           They are not used here, and I believe  
9 that funding is necessary for demonstrations of  
10 biopower projects as well as biofuel projects.  
11 Actually, you know, there is a lot of federal  
12 support for biofuels already. So, I think the  
13 state needs to step in and support the biopower  
14 projects.

15           I'm also pleased that there is a  
16 recommendation that diversion credits are allowed  
17 for conversion technologies. I would support even  
18 an increase in diversion goals because I think we  
19 will be able to recycle more as well as convert  
20 some of this to energy, a lot of the waste to  
21 energy.

22           I want to at the same time, I think we  
23 should adopt policies to insure that we are not  
24 then exporting our waste outside of the state. I  
25 think we should take responsibility for the waste



1     that we produce here and, you know, just like we  
2     have regulations about our state's RPS policy not  
3     to allow outside power plants to exceed the  
4     pollution air emission requirements of combined  
5     cycle plants in the state, we shouldn't be  
6     shipping our waste out of state or exporting our  
7     environmental problems. I hope that we allow  
8     these to be permitted, conversion technologies be  
9     permitted in the state.

10           I'm also pleased that you are supporting  
11     an integrated and coordinated regulatory  
12     environment to facilitate biomass projects. In  
13     the summary of recommendations, there are several  
14     state agencies listed, and I would like to see a  
15     similar recommendation that the State Water  
16     Resources Control Board facilitate biopower  
17     projects.

18           I wanted to ask Melissa who spoke before  
19     me whether she was aware of any problems  
20     permitting dairy lagoons or dairy impoundment,  
21     dairy waste impoundment facilities. To my  
22     knowledge, there hasn't been any for the last  
23     about a year and a half in the Central Valley, and  
24     this is a problem for several of our projects as  
25     well.

1           I think the Water Resources Control  
2 Board should look at facilitating the agricultural  
3 sector and food processing sector so that we can  
4 get some of these projects built.

5           I thank you again for your time and the  
6 great report that Navigant put together. I am  
7 impressed they did it in the short time they had,  
8 and so I'll submit my comments. Thank you again.

9           PRESIDING MEMBER BOYD: Thank you.  
10 Monica Wilson and then John Bennemann and then  
11 Frank Hasenick.

12           MS. WILSON: Good afternoon. Thank you  
13 very much. My name is Monica Wilson. I am with  
14 GAIA, the Global Alliance for Incinerator  
15 Alternatives and the Northern California Recycling  
16 Association. I'd like to thank you for this  
17 opportunity to give our feedback on this report.

18           I am here primarily to raise concerns  
19 about the gasification pyrolysis and plasma of  
20 mixed municipal solid waste. I want to make that  
21 very clear. I am talking about mixed municipal  
22 solid wastes.

23           We and many others feel that the data is  
24 still out, and, in fact, contradicts the  
25 assertions made in the report about the benefits

1 of these technologies. For example, the Navigant  
2 presentation this morning described them as  
3 environmentally acceptable, and yet a number of  
4 local regulatory agencies have found that  
5 environmental data for proposals has been lacking  
6 and in fact have stopped proposals.

7 Also the assertion that gasification of  
8 pyrolysis and plasma of municipal solid waste is  
9 non-combustion is simply not the case for the vast  
10 majority of proposals that we have seen in  
11 California.

12 Combustion has been an element of almost  
13 every single proposal I've seen. That is why  
14 these technologies are considered by the European  
15 union to be incineration and are regulated as  
16 such.

17 I would recommend that this working  
18 group move away from the term conversion  
19 technology for mixed municipal solid waste because  
20 that encompasses so many different technologies,  
21 so many different waste streams, so many different  
22 materials, and also so many different  
23 environmental impacts.

24 It is unclear to me whether the report  
25 is recommending the use of mixed municipal solid

1 wastes or source separated organics from municipal  
2 solid waste. I think that is a clarification that  
3 would be very helpful to make in the report.

4 I would urge the report focus on source  
5 separated organics from the municipal solid waste  
6 stream. The reason for this is that mixed  
7 municipal solid wastes include plastics with  
8 additives from brominated flame retardants to lead  
9 and contain many other unpredictable mixtures of  
10 chemicals.

11 Thermal treatment is simply not the  
12 appropriate or the smart way to deal with mixed  
13 municipal solid waste. I won't elaborate today  
14 because I know we are short on time on my  
15 recommendations for that, but I do want to sum up  
16 some of the environmental emission concerns around  
17 thermal disposal of mixed municipal solid waste,  
18 which is that facilities have had problems with  
19 emissions of dioxins, heavy metals, VOCs, Nox,  
20 particulates and other emissions.

21 Because municipal solid waste is such an  
22 unpredictable mixture, making efficacy -- this  
23 makes efficacy of mitigation efforts equally  
24 unpredictable. I know it sounds trite, but  
25 garbage in and garbage out. That is what we've

1 observed when looking at facilities overseas.

2 This is again why I strongly urge that  
3 when it comes to municipal solid waste, that we  
4 focus on the source separated organics from that  
5 waste stream.

6 Another reason for doing this is that  
7 the plastics, metals, and other elements of  
8 municipal solid waste that are not organic, are  
9 not biomass. These come from non-renewable  
10 resources and were better served by reducing and  
11 recycling those resources in order to reduce  
12 reliance on non-renewable resources.

13 I am also greatly concerned about the  
14 report's recommendation that there be an executive  
15 order that urges a "favorable regulatory  
16 environment for the waste management industry".  
17 One of the major reasons for regulations is the  
18 protection of the public.

19 Given the historical performance of  
20 these types of mixed municipal solid waste  
21 incinerators, gasification, pyrolysis, and plasma  
22 such as the accidental leak of toxic acids from a  
23 German facility that sent many nearby residents to  
24 the hospital.

25 We believe that the state should protect

1 communities with the highest regulatory and siting  
2 permits. The siting of municipal solid waste  
3 incinerators has historically and will continue to  
4 be an environmental injustice issue. I was glad  
5 this was acknowledged in the report very up front,  
6 but it seemed ironic to me that then the report  
7 goes on to recommend a favorable regulatory  
8 environment. That really begs the question for  
9 communities where the priorities really lie.

10 I could go into more detail about the  
11 1984 report to the California Waste Management  
12 Board for the rapid political difficulties facing  
13 waste energy conversion plant sitings, which  
14 sounds very familiar, which recommended that  
15 facilities be sited in vulnerable communities and  
16 recommended that facilities be sited at least five  
17 miles away from middle and higher socio-economic  
18 strata neighborhoods. That continues to be a  
19 problem that we see today in the proposals.

20 To protect these politically vulnerable  
21 communities, I would strongly urge that this  
22 recommendation be amended to remove the suggestion  
23 or at least to make sure that the municipal solid  
24 waste industry continues to have to meet strong  
25 regulatory and siting requirements.

1           I'd also urge a change in the first  
2    recommendation to the Energy Commission, which  
3    recommends finance pilot projects for municipal  
4    solid waste. As I've said before, I would prefer  
5    that be focused on source separated organics. One  
6    of the reasons that this is a risky venture is  
7    when we look at facilities like the thermal select  
8    facility in Germany for the mixed municipal solid  
9    waste gasification facility, this facility  
10   operated for a number of years and closed after  
11   losing half a billion dollars. This is a huge  
12   financial risk.

13           That same facility notably used 17  
14   million cubic meters of natural gas in 2002 and  
15   delivered no energy or heat or electricity in any  
16   way back to the grid. So, again, that begs the  
17   question of the efficiency of these technologies.  
18   So, I would argue it would be a serious misuse of  
19   state funds at this point to invest in municipal  
20   solid waste gasification, pyrolysis, or plasma.

21           I'd further urge a change in the  
22   recommendation that an executive order be made to  
23   make it easier to build new municipal solid waste  
24   gasification, pyrolyses, and plasma as well as  
25   give diversion credits to these technologies.

1           First of all, these technologies would  
2   dispose of waste that they dispose into the air.  
3   Second, these technologies could indeed undermine  
4   California's commitment to waste prevention,  
5   recycling, and composting.

6           I think there is a really important  
7   thing to note here about recycling, which has been  
8   hit on a few times today, but recycling actually  
9   has tremendous economic -- I'm sorry tremendous  
10   energy benefits. If we look at the currently  
11   recycling rate nationwide, the current amount of  
12   recycling nationwide has conserved an equivalent  
13   of 11.9 billion gallons of gas in 2003. I think  
14   that is rather significant, and that is looking at  
15   a national current recycling rate of 30 percent.

16           By upping that by just a few percentage  
17   points, we are actually conserving the equivalent  
18   of a great deal of energy. I don't want that to  
19   be forgotten when we are looking at municipal  
20   solid waste.

21           Finally, I just recommend a re-focus or  
22   clarification when talking about municipal solid  
23   waste that the focus should be on source separated  
24   organic materials from that waste stream as  
25   opposed to the entire waste stream collective.



1           I strongly urge against any  
2    recommendations for state handouts, tax credits,  
3    waste diversion credits, or other incentives  
4    including loose regulations that would make it  
5    easier to build these sorts of incinerators in the  
6    state.

7           Thank you very much for this  
8    opportunity, and I look forward to the final  
9    report.

10           PRESIDING MEMBER BOYD: Thank you. John  
11    Bennemann. A question? Monica, there is a  
12    question out here.

13           UNIDENTIFIED SPEAKER: While she is  
14    coming back, just for the record the demonstration  
15    facility we are looking at is not going  
16    (inaudible). I want to ask you if you have taken  
17    a look at the data that Bill Welch from UC  
18    Riverside came out with. It actually looked at  
19    several conversion technologies using (inaudible)?

20           MS. WILSON: My first comment is that  
21    I'd like to know the source of the data. I would  
22    like to know if that data comes from the industry  
23    itself, how it is verified, and furthermore, when  
24    that data occurs. Is this over a long period of  
25    time, is this in terms of continuous monitoring,

1 or at certain points when there may be for example  
2 less emissions due to the materials that are  
3 entered in the system? There are a lot of  
4 variables to look at.

5           What I kept seeing is that we have some  
6 information that there have been excess of  
7 regulatory limits in Germany and at other  
8 facilities. That has raised a great question in  
9 our minds because I can't expect every facility is  
10 going to be -- I just can't expect that these  
11 facilities are always going to be operating at  
12 optimum performance. When they are not is when we  
13 are concerned. What we found is that a lot of  
14 these facilities have in fact been facing a lot of  
15 operational problems and as a result, they have  
16 not been operating at optimum performance. That,  
17 again, is when the community is most at risk.

18           UNIDENTIFIED SPEAKER: (Inaudible.)

19           PRESIDING MEMBER BOYD: Thank you. I  
20 was remembering your testimony. John Bennemann,  
21 Frank Hasenick, and then Lisa Morgenthaller-Jones.

22           UNIDENTIFIED SPEAKER: (Inaudible.)

23           PRESIDING MEMBER BOYD: What was that?

24           MR. VANBOGART: Good afternoon, my name  
25 is John Van Bogart, and I am with Clean Fuel USA.

1 We are based out of Georgetown, Texas, and we are  
2 manufacturers of alternative fuel and biofuel  
3 dispensers.

4 Clean Fuel USA is the marketing and  
5 sales element of our company, and we have our  
6 manufacturing facility is clean fueling  
7 technologies. I wanted to focus in on the  
8 infrastructure part of it.

9 Oftentimes with successful programs, you  
10 need three elements. You are going to need the  
11 fuel supply, the infrastructure to deliver the  
12 fuel, and then the vehicles. So, what I would  
13 like to talk about is the infrastructure here.

14 Let's see. We build purpose built  
15 dispensers. Not all dispensers are built the  
16 same. The standard dispensers that are out on the  
17 street today are capable of handing up to E-10 on  
18 the ethanol side and probably up to B-15, possibly  
19 B-20 on the biodiesel side. All the elements in a  
20 dispenser, which has two main components, it has  
21 the electronics and it has the hydraulics.

22 It is the hydraulics that need to be  
23 changed out on the dispenser. The dispenser  
24 industry is very heavily regulated. These are  
25 just some of the agencies that regulate the

1 dispenser industry: National Institution of  
2 Standards and Testings, Weights and Measures, the  
3 FCC governs the electronic microwave and credit  
4 card transactions, NFPA is the fire safety  
5 regulations, ADA there are height requirements for  
6 dispensers, CARB has requirements for vapor  
7 recovery on gasoline style fuels, and UL governs  
8 the product safety. To this date, there is no UL  
9 approved ethanol dispenser. Currently we are in  
10 that process. We expect to have our UL ratings  
11 sometime this month, probably in April. The UL  
12 Handbook basically is 87 defines the dispenser  
13 regulations.

14 I have a couple of slides of some  
15 dispensers that we put at NASA. This is where the  
16 tank is in the back and above ground with a card  
17 reader by the side. This has no electronics.  
18 This was sort of fleet application at the airport  
19 in Nevada.

20 This is our Cape Kennedy Space Center,  
21 this is a typical island or retail application  
22 here, with a card reader in the pump where you can  
23 purchase the fuel, POP system and the tank in the  
24 background is an above ground. This system is  
25 also equipped for underground applications as

1 well.

2 This is a dispenser that we put up. I  
3 believe this dispenser is in Illinois. We are the  
4 only authorized Up-Fitter for Wayne Dresser and  
5 Gilbarco dispensers, which represents about 97  
6 percent of the retail marketplace on dispensers.

7 The way of the future we see clean fuel  
8 islands going up, mostly with independents. The  
9 majors are still a little bit on the sidelines.  
10 They are monitoring the E-85 and the biodiesel  
11 markets. So, it is our hope that they will engage  
12 the industry and start to deploy some stations in  
13 the near future. I am not sure how that propane  
14 dispenser got out there.

15 This is a dispenser that we put in in  
16 New Mexico. We have blending technology that we  
17 are working on where the consumer will be able to  
18 go to the pump and select a different blends like  
19 they do today with the regular, mid-grade, and the  
20 super so we can have the 100 percent biodiesel in  
21 the ground or the (indiscernible) alcohol in the  
22 ground. The customer can select, and the blending  
23 will be done at the dispenser rather than at the  
24 terminal.

25 These are some of the projects that we

1 are working on with the Air Resources Board. Over  
2 the last few years one of the market hurdles was  
3 vapor recovery. EVR standards are I believe will  
4 be complete sometime this year in October. We  
5 worked with the ARB with George Lu's Group, and  
6 they have created a path to deploy E-85 fuel here  
7 in the State of California pending UL approvals  
8 which will come out later this year.

9 Also type approval. We've gotten type  
10 approval on two models now. We are waiting for  
11 the third model. Also they will also comply with  
12 the fire safety protection standards.

13 These are the certification projects  
14 that we are proposing. The DOE facility at  
15 Lawrence Livermore. DOE has funded this project.  
16 We perceive that after we gain our UL, sometime in  
17 April we will begin construction on this project  
18 and submitting a complete list of materials and  
19 dispenser with Stage 1 and Stage 2 vapor recovery  
20 for the purpose of certification for both an  
21 underground facility at Livermore.

22 CalTrans we are working with Pacific  
23 Ethanol and then Chevron in the State of  
24 California to certify an above ground application  
25 for dispensers for fleets. We are working with

1 the Marine Base at Camp Pendleton, Miramar and 29  
2 Palms.

3 This is the NEVC website. There is a  
4 lot of information about ethanol on this website  
5 and especially E-85. Currently in the United  
6 States there is about five million vehicles on the  
7 road that are flex fuel. Here in California there  
8 is about 300,000. Production next year is going  
9 to be about 700,000. In California it is  
10 predicted that we will probably purchase somewhere  
11 between 50,000 and 100,000 of those vehicles.

12 That means by 2010, there could be as  
13 many as one million FFV's here in the State of  
14 California which is pretty encouraging.

15 This is my contact information. I had  
16 some recommendations that I would like to go over.  
17 I wanted to recommend that the State of California  
18 stay away from mandates. Vehicle manufacturers  
19 and equipment suppliers, we don't really play real  
20 well with mandates. We would rather see  
21 incentives. Incentives to put products onto the  
22 street.

23 Also that the CEC revitalize their AFI  
24 program. The Alternative Fuel Infrastructure  
25 Program. We thought that was a very successful

1 program and was very well received by the  
2 industry.

3 Some industry recommendations. We are  
4 going to be working with GM and Pacific Ethanol  
5 and Wayne Dresser to create a strategic plan in  
6 California to deploy E-85 stations. This is going  
7 to be the missing link and hopefully between the  
8 industry interests, we can tie this loop and start  
9 to deploy E-85 stations throughout California.

10 Typical cost for a station for an above-  
11 ground application can run anywhere from \$60,000  
12 to \$200,000. UL certification and CARB  
13 certification, this is going to run anywhere from  
14 a half a million to one million dollars by the  
15 time the whole process is done.

16 We are going to be coming out with up-  
17 fit kits for existing dispensers on the street.  
18 Those packages will range somewhere in the  
19 neighborhood of \$3,000 to \$10,000 depending on the  
20 site location what exists at the site.

21 I'll take any questions if anyone has  
22 any questions.

23 PRESIDING MEMBER BOYD: Thank you. Any  
24 questions? Dean's got to be intimately familiar  
25 with this.



1 (No response.)

2 PRESIDING MEMBER BOYD: Thank you very  
3 much. Frank Hasenick, he's not here. Lisa and  
4 Adam Ortega will be next.

5 MS. MORGENTHALER-JONES: That's too bad.  
6 I was hoping for your sake I was the last one. My  
7 name is Lisa Morgenthaller-Jones. As I said Arare  
8 Ventures.

9 We are a start-up venture capital firm.  
10 I came to this from Anaerobic Digesters. Suffice  
11 it to say, we have been very active volunteers  
12 with Schwarzenegger's team, and twenty months ago,  
13 we begged those guys to table the Hydrogen Highway  
14 in favor of among other things, Anaerobic  
15 Digesters. I was in the horseshoe begging.

16 That is where we come from. We have  
17 spent the better part of two years looking at  
18 every technology from Ireland to Hawaii. I have  
19 been to digesters from Gettysburg to Chino. We've  
20 had people proposing everything including mashing  
21 black flies for the oil that you can get out them.

22 Today we heard about using doggy doo  
23 doo, making power out of that. We will listen to  
24 anything. We are helping with DOE lab kinds of  
25 technologies. That is where I come from. We've

1 got very open minds.

2 I have more questions for you today than  
3 I have anything to say because you don't need  
4 anything said to you. I am going to start with  
5 three questions, and I am going to finish with a  
6 really tough question. They couldn't answer this  
7 question at Stanford two nights ago, and on that  
8 panel was Gil Masters, Lynn Ore, and Jim Sweeney.  
9 If you guys can answer it, you will have solved a  
10 very big problem.

11 The first three questions for everyone  
12 in the room, if you drove here would you raise  
13 your hand. If you took public transit, would you  
14 raise your hand. If you walked, rollerbladed,  
15 well bicycled, yes. I was fundamentally talking  
16 about could you have made it here under your own  
17 steam.

18 UNIDENTIFIED SPEAKER: (Inaudible.)

19 MS. MORGENTHAUER-JONES: Only from the  
20 hotel, okay. Everyone in this room knows what I  
21 am about to say, but you know we loved your  
22 report, we come from the Wall Street world. I was  
23 the No. 1 mutual fund manager in the spring 2000,  
24 I had 8,000 mutual funds. We love what you are  
25 doing. There is a ton of private equity money out

1     there ready to invest in this area.

2             That is not the issue. I submit to you  
3     that I come from Silicon Valley where we think we  
4     are the masters of the universe. To me, three of  
5     our partners were here today because you are the  
6     masters of the universe and it ain't just because  
7     you hold decisions over money making.

8             In 1992, 1993, Arabs tried -- I beg your  
9     pardon, Al Qaeda tried to knock down a building.  
10    They failed. Eight years later they succeeded.  
11    We were surprised. What were we thinking? It  
12    only took them eight years, but they got it done.  
13    We manage to duck two bullets this past five  
14    months. Katrina was the first bullet to a state  
15    that uses 20 billion gallons of gasoline in a  
16    year. The second bullet was two weeks ago. Saudi  
17    refinery oil bombing.

18            We were told from a certain office just  
19    down the street here that we would today be  
20    staring at \$6.00 a gallon gasoline had that bomb  
21    actually done the damage it was meant to do.  
22    Other than briefings with McCain and every other -  
23    - I know we have been in DC where they said we  
24    average one plot toward it every two weeks in this  
25    country for the last four years.

1           To me, you are the center of the  
2   universe, and the reason is I love this adopted  
3   state of mine. I was born in Des Moines. This is  
4   my state. We will grind to a halt if somebody  
5   manages to cut off our gasoline and our oil.

6           Schwarzenegger for whom as I said we  
7   have been extremely active, can't get a state of  
8   emergency for this town, which could be flooded  
9   with the next really serious major rainstorm  
10   because the feds are stonewalling him. They can't  
11   stonewall you. You guys if you -- everyone in  
12   this room is clearly on board with this because  
13   you have sat for four hours. In this last four  
14   hours, you get the iron rump award.

15           You are the ones that can go back to  
16   your teams and say it is time for a declaration of  
17   emergency. If this state is ground to a halt, I  
18   now ask you the question that I asked Stanford.  
19   They couldn't answer. What would happen to us if  
20   you cut off any significant chunk of our 20  
21   billion gallons of gasoline per year or you took  
22   the price to \$6.00 or more?

23           PRESIDING MEMBER BOYD: \$6.00 we would  
24   pay it. If they cut it off, we would be in a  
25   world of hurt.

1 MS. MORGENTHAUER-JONES: I submit to you  
2 that your report contains everything except the  
3 one thing I would love to see. What do we do if  
4 they cut us off? Thank you.

5 PRESIDING MEMBER BOYD: I should have  
6 had you last. I would have liked to have gone  
7 home with all that enthusiasm that you impart.

8 Adam Ortega.

9 MR. SCHAFFER: Don left me a brief note.  
10 He had to catch a plane. Don is on our State Board  
11 of Food and Agriculture from Southern California  
12 represents municipal water utility down there.

13 He just pledged that he will be  
14 submitting written comments on behalf of the State  
15 Board of Food and Agriculture, and he regretted  
16 that he had to leave.

17 PRESIDING MEMBER BOYD: Thank him. At  
18 least he didn't plea for early start like many  
19 people who had planes to catch.

20 Evan Hughes?

21 (No response.)

22 PRESIDING MEMBER BOYD: We may have worn  
23 them out. Chris Donati? Good for you Chris and  
24 then Kimberly Holmes would be next if Kimberly is  
25 still here. Then I will ask if there are any poor

1 people on the phone still.

2 MR. DONATI: That's a flash drive.

3 Anyone want to answer a SOS call? I am fairly  
4 inept. I guess then due to the impacted schedule,  
5 I do have a full color presentation, but you guys  
6 will have to bear with me.

7 Basically, my name is Chris Donati, and  
8 I am here with Western Milling Inc. We are a long  
9 standing company. We have been around since 1935  
10 in the feed mill industry. We started in Southern  
11 California and grew the operation to over \$300  
12 million in sales distributing mostly to local  
13 dairy, dairy producers.

14 I'll skip over this part because it  
15 really doesn't pertain all that much to what we  
16 have today. Western Milling Quality Feed has  
17 reincarnated in 2000. Right now it is the largest  
18 single site feed distributor in the United States.

19 One of our subsidiaries is Phoenix Bio  
20 Industries. It is a 25 million gallon per year  
21 ethanol production facility. We started  
22 construction in 2004, and we are the first largest  
23 scale ethanol plant in California. Like I  
24 mentioned that is majority owned by the Western  
25 Milling Group.

1           Here is a picture of our headquarters,  
2   which looks a lot bigger on the screen. Some of  
3   the business facts really quick. We have dairy  
4   and poultry, retail, retail feed and specialty,  
5   trucking, transloading, environmental consulting.  
6   Another growing part of our business is actually  
7   the wet distiller's grain that comes in as we all  
8   know is a bi-product of the dry mill ethanol  
9   production process.

10           Yet another wonderful graphic is the  
11   plant there in Goeshen right off Highway 99 if you  
12   guys ever go 99 about a half hour south of Fresno,  
13   you will drive right by it.

14           You might be asking yourself, what are  
15   some of the benefits, why do I care on a macro  
16   level about having an ethanol plant in my  
17   community. Well, some of the benefits that we've  
18   brought to the local Goeshen, which by the way is  
19   economically depressed area, is that we brought  
20   over 100 new construction and 30 full time jobs  
21   that are well paying jobs that have a significant  
22   contribution to the local economy.

23           The plant costs over \$30 million to  
24   build. The construction did bring a one-time  
25   boost of over \$70 million to the state and to the

1 local economies while generating 350 new permanent  
2 jobs and \$9 million in additional household  
3 revenue throughout the entire economy.

4 This project will generate over \$1  
5 million in new taxes for state and local  
6 governments. There are some disadvantages to  
7 building in California. Our midwestern  
8 competitors do receive many forms of state  
9 assistance. Illinois, for example, and Ohio, they  
10 both provide funds to support investment in  
11 ethanol plants.

12 Midwestern competitors also get  
13 financial support for ethanol producers in  
14 Minnesota, North Dakota, and Texas. In Minnesota,  
15 they also require a specific quantities of ethanol  
16 blends like many people mention today.

17 Almost universally all of our  
18 competitors have lower electricity prices, and  
19 some actually have tax reduction incentives like  
20 Illinois and Hawaii.

21 To overcome, you know, we are looking to  
22 overcome some of these disadvantages. What can we  
23 do as a group as a state to attract more of this  
24 environmentally safe beneficial industry to  
25 California. One thing that we have heard today



1 and just to repeat is the support for expedited  
2 permitting.

3 We could mandate counties to allow rapid  
4 processing of permits for an increased fee. I  
5 don't think it is the cost that is the  
6 constraining factor, it is just we need to get it  
7 going as people have mentioned today.

8 If we could reduce or streamline  
9 permitting requirements for biofuel facilities and  
10 like Oregon, if we could have one body coordinate  
11 all permits for state, local, and national  
12 regulatory committees as I mentioned.

13 Another thing that we can't operate  
14 without is year-round demand. If we could update  
15 the CARB model to take into account the lower  
16 evaporative emissions from the newer vehicles,  
17 that would significantly alter the demand  
18 equation. If you guys are interested, I do have  
19 several packets explaining that in more detail so  
20 we don't have to take up everybody's time on that.

21 Also as the gentleman just mentioned,  
22 the expansion of the E-85 infrastructure. If we  
23 could either encourage a mandate to flex-fuel  
24 vehicles or especially encourage a mandate to the  
25 growth of the E-85 fueling stations would greatly

1 aid our cause.

2 Without further ado, I thank you for  
3 your time, and if you have any questions, I will  
4 be around afterwards. Thank you once again.

5 PRESIDING MEMBER BOYD: Maybe we can  
6 retrieve out of the computer your presentation and  
7 at least docket it in our records so we can look  
8 at it. Thank you. Sorry about the electronics.

9 MR. DONATI: Thank you.

10 PRESIDING MEMBER BOYD: We have a  
11 question.

12 MR SCHAFFER: I know and it is so late.  
13 I was down at the Goeshen plant a little while ago  
14 and talking with Inart Knudsen, your Vice  
15 President, and he was talking about how there are  
16 plans you guys would like to go to renewable fuel  
17 to power then plant rather than electricity, but  
18 to disconnect from the grid you would be paying  
19 the public utility like half a million dollars a  
20 year or something like that. Do you know anything  
21 about that or can elucidate on that?

22 MR. DONATI: Yes. In any new or  
23 beginning industry, there are structural  
24 challenges, and I do believe Inart of course would  
25 be a better one to talk to about that specific

1 one. As to going to renewable fuels, we would  
2 like to. It comes down to down at the end of the  
3 day to economics.

4 With these structural costs that are  
5 imposed by being involved, it makes it very  
6 difficult to go outside the normal pattern. If  
7 you would like, I will send you something more  
8 detailed.

9 Thank you.

10 PRESIDING MEMBER BOYD: Thank you. Is  
11 Kimberly Holmes here or did she bale?

12 (No response.)

13 PRESIDING MEMBER BOYD: Is there anyone  
14 on the phone who wanted to say something?

15 (No response.)

16 PRESIDING MEMBER BOYD: They are gone  
17 too. Is anybody in the audience who didn't get  
18 called up who might have turned in a blue card or  
19 wanted to say something?

20 (No response.)

21 PRESIDING MEMBER BOYD: One, I want to  
22 thank you all for this day and for being here. I  
23 particularly want to thank the members of the  
24 Interagency Working Group who toughed it out for  
25 the whole day.

1           I want to comment that a lot of  
2   compliments were thrown in the direction of the  
3   Energy Commission just because it is our building,  
4   it is our hearing room, it is our dias, and some  
5   of us got to sit up on it, but a lot of the  
6   compliments equally are directed to, should be  
7   directed to the members of the Working Group and  
8   of course all the kudos that went to the  
9   consultants are probably well deserved.

10           Perhaps the short period of time in  
11   which they were able to produce this is an  
12   indication of their personally diligence,  
13   integrity, and intelligence and to the incredible  
14   library of material that already exists on this  
15   subject generated by this working group and its  
16   predecessor working group, which I also chaired  
17   years ago under the last governor.

18           There is just a lot of information, and  
19   now it is time to move something forward. We will  
20   obviously continue to work on this report or the  
21   consultant will. This Working Group will give the  
22   Governor recommendations by the end of this month,  
23   which working group means you've got a lot of work  
24   to do in a very short period of time.

25           Some of us who were trained for years

1 and years, they are used to hearings going at  
2 least this late or later, but it is kind of  
3 different for the Energy Commission folk to go  
4 this late. So, I thank you all, and to all a good  
5 night. Be careful out there.

6 Thanks.

7 (Whereupon, at 6:00 p.m., the workshop  
8 was adjourned.)

9 --oOo--

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## CERTIFICATE OF REPORTER

I, CHRISTOPHER LOVERRO, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Workshop; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 17th day of March 2006.

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